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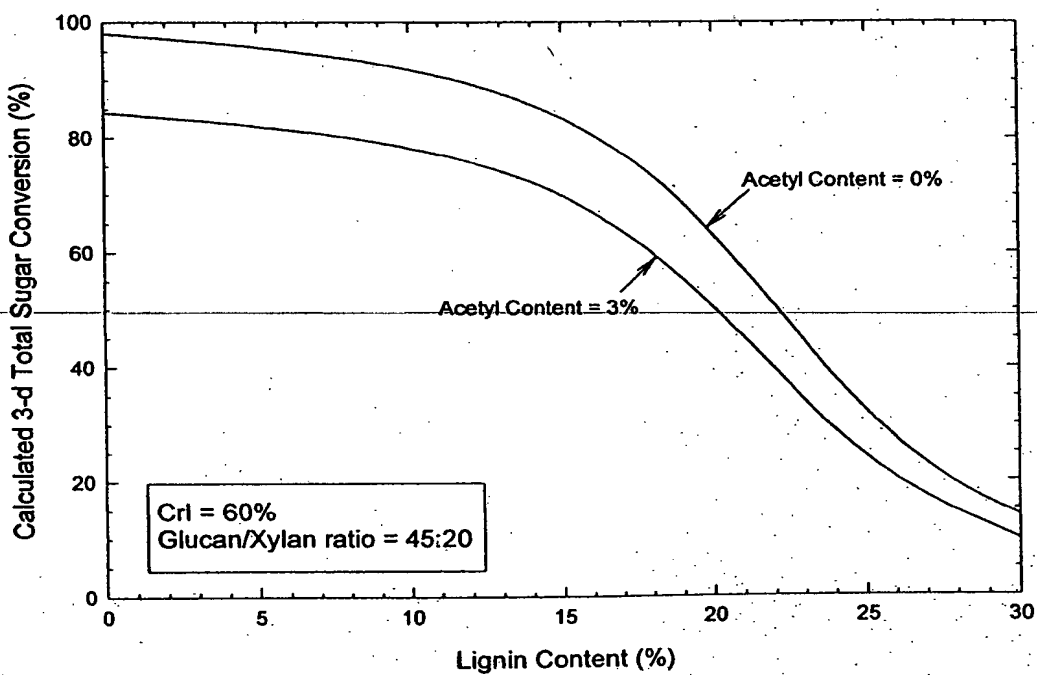


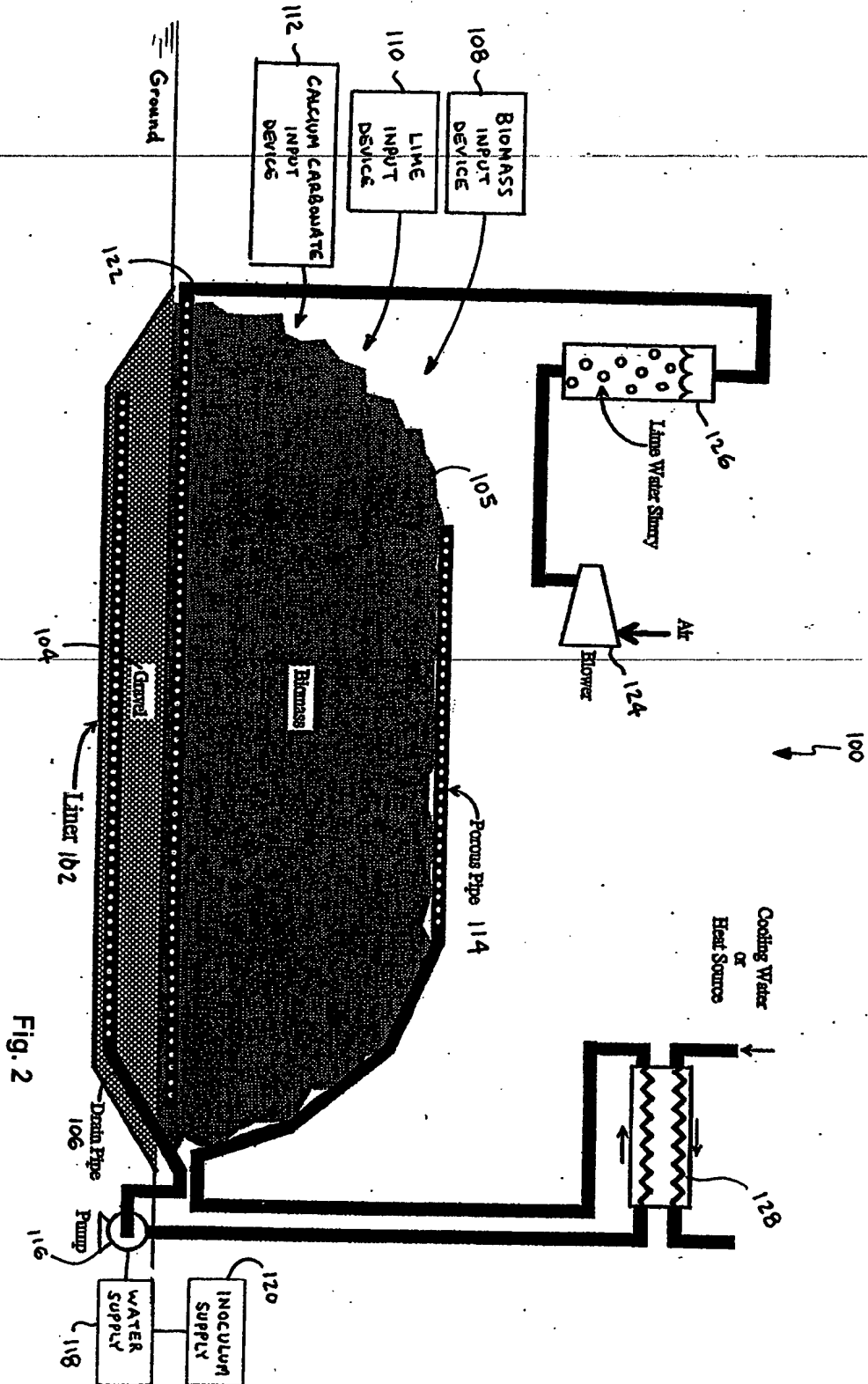
Fig. 1
PRIOR ART

METHODS AND SYSTEMS FOR
PRETREATMENT AND PROCESSING OF
BIOMASS

Filed: 10/31/03

Inventors: Mark Holtzaple et al.

Attorney Docket: 017575.0782 Page 2 of 51
(TAMUS 1955/1603/1571)



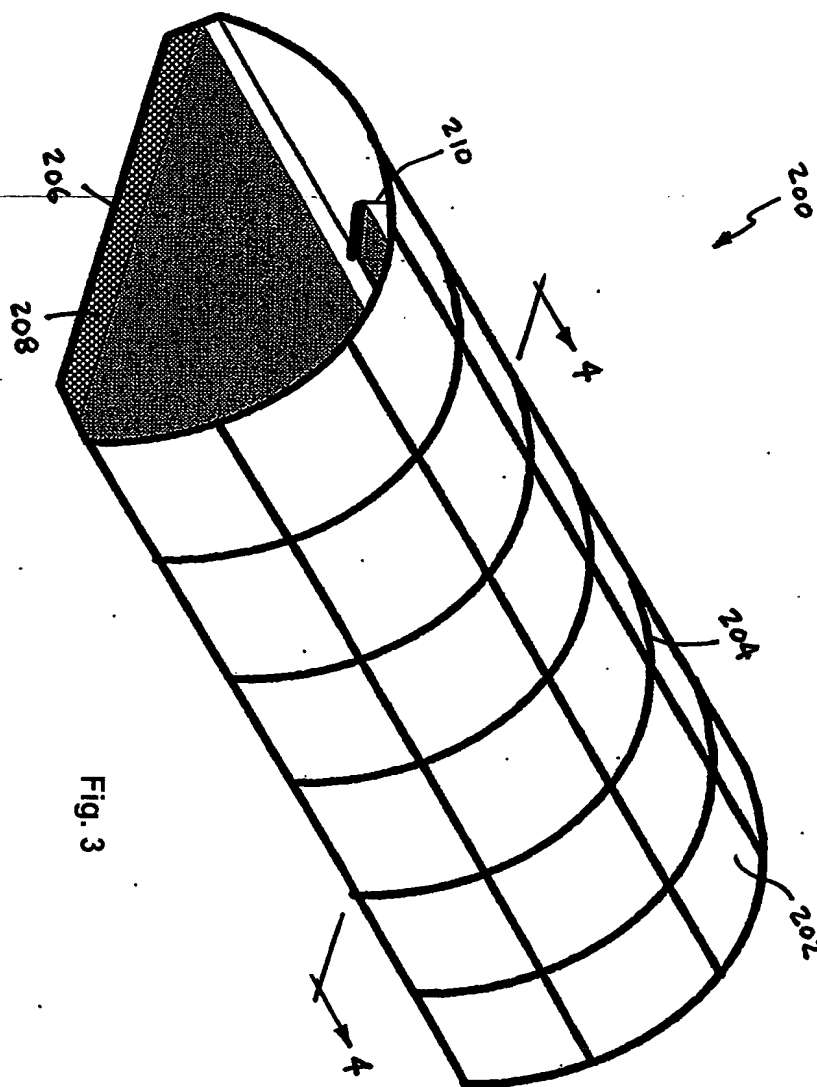
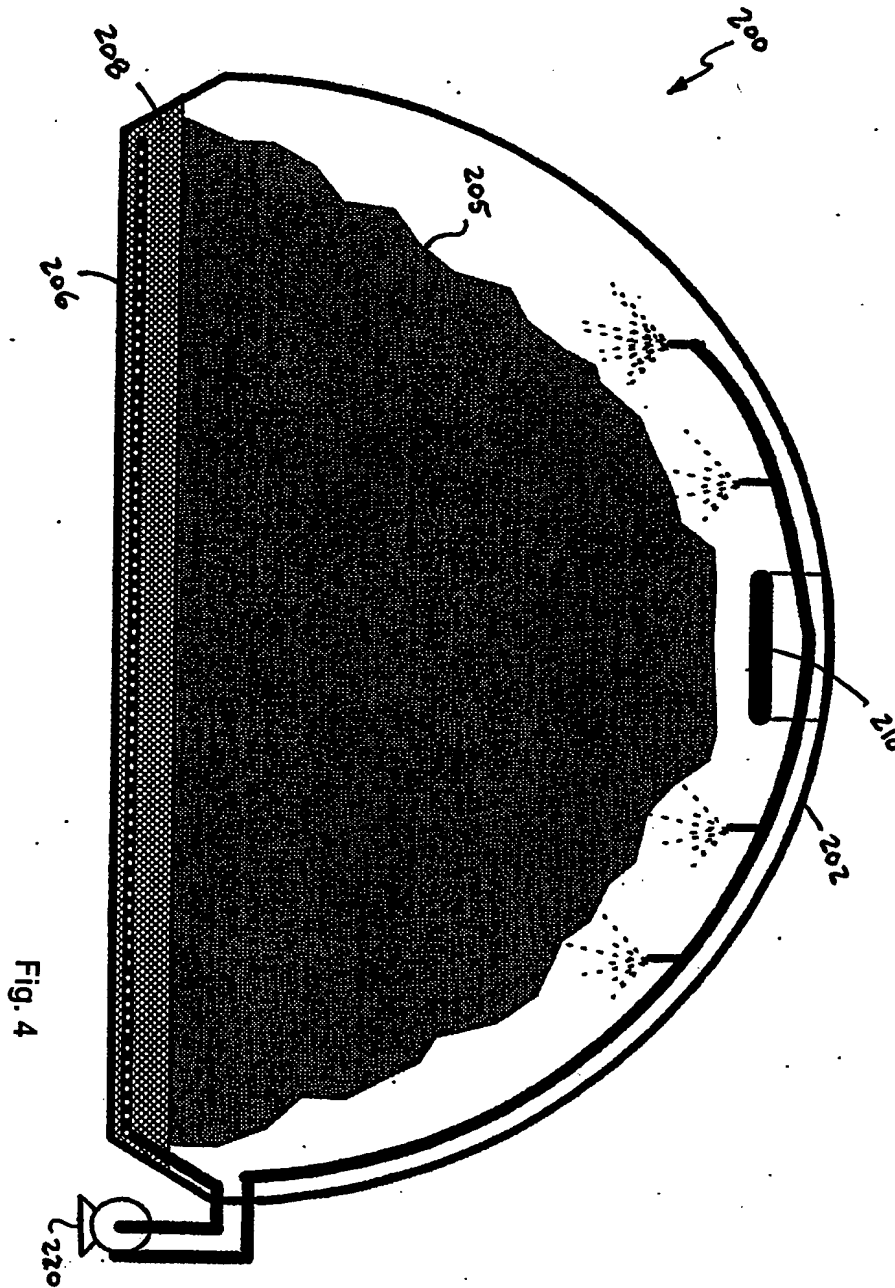


Fig. 3



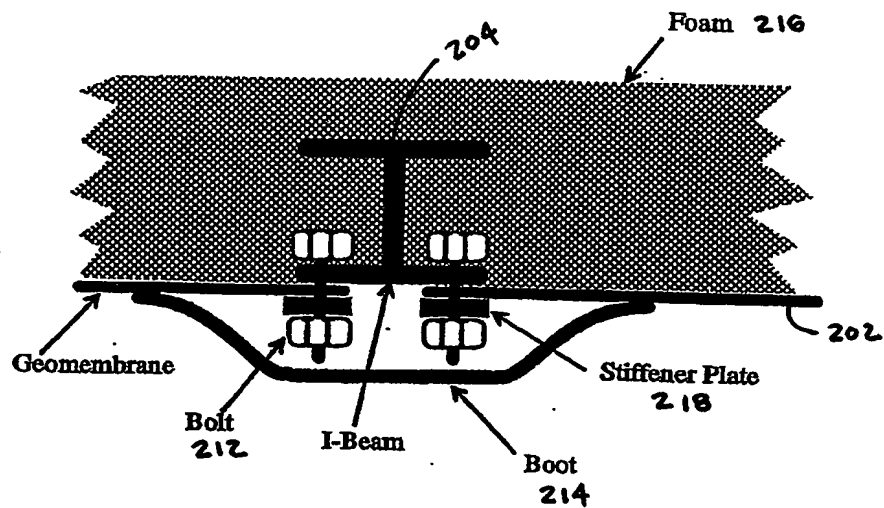


Fig. 5

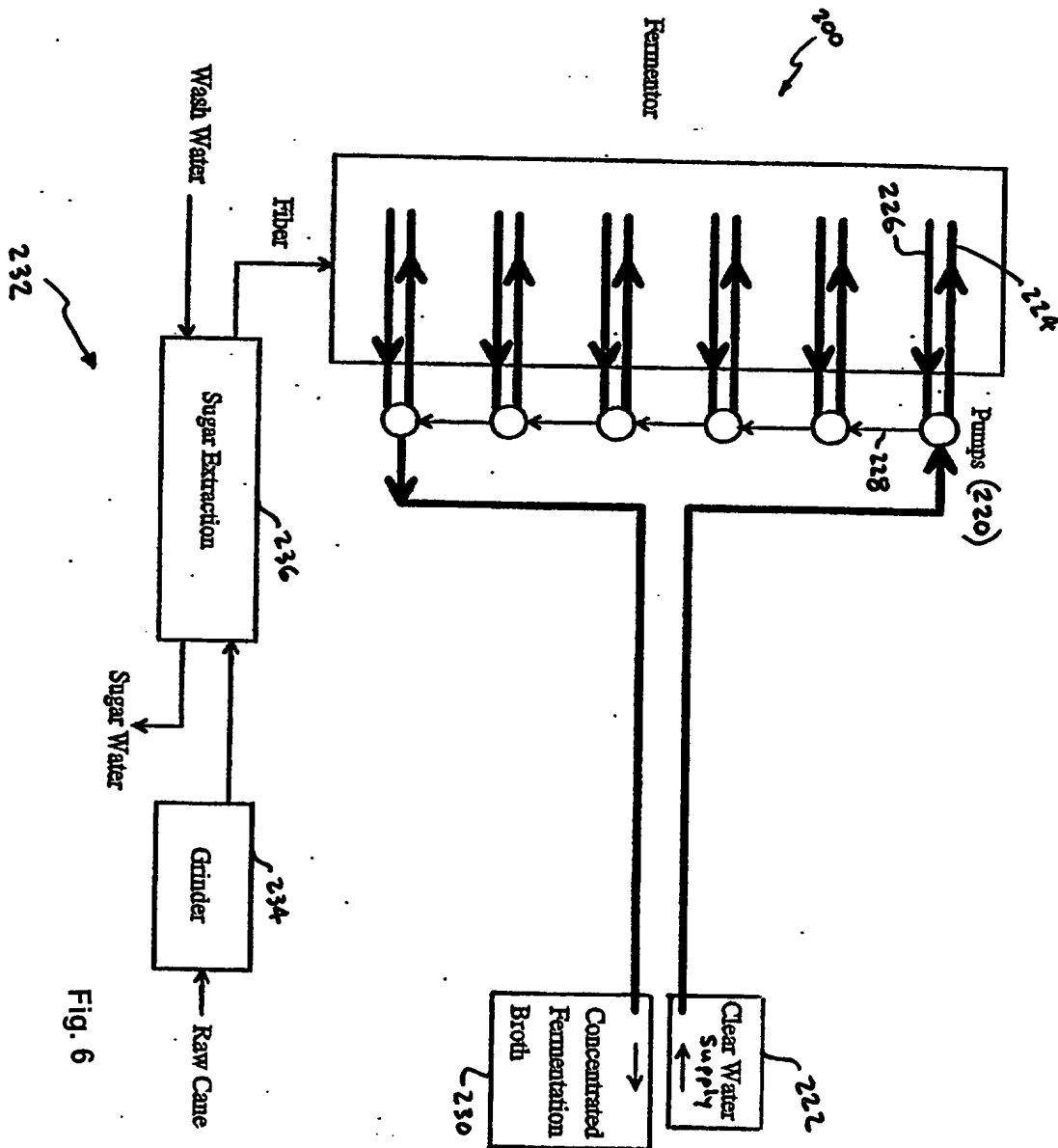
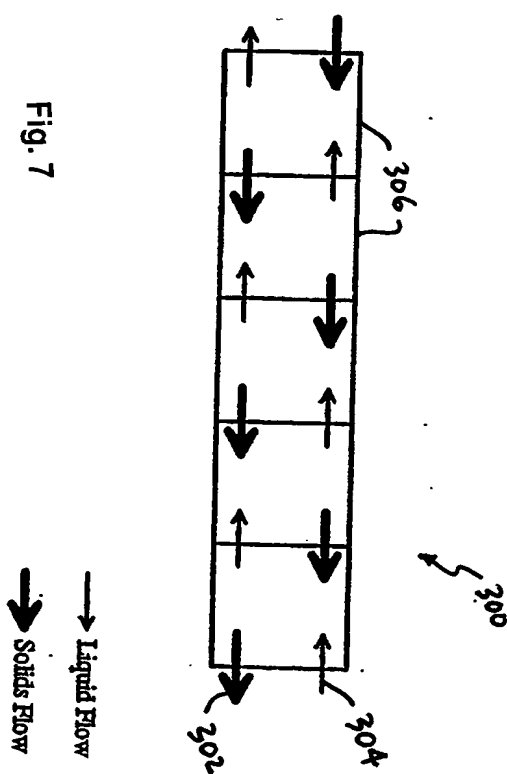


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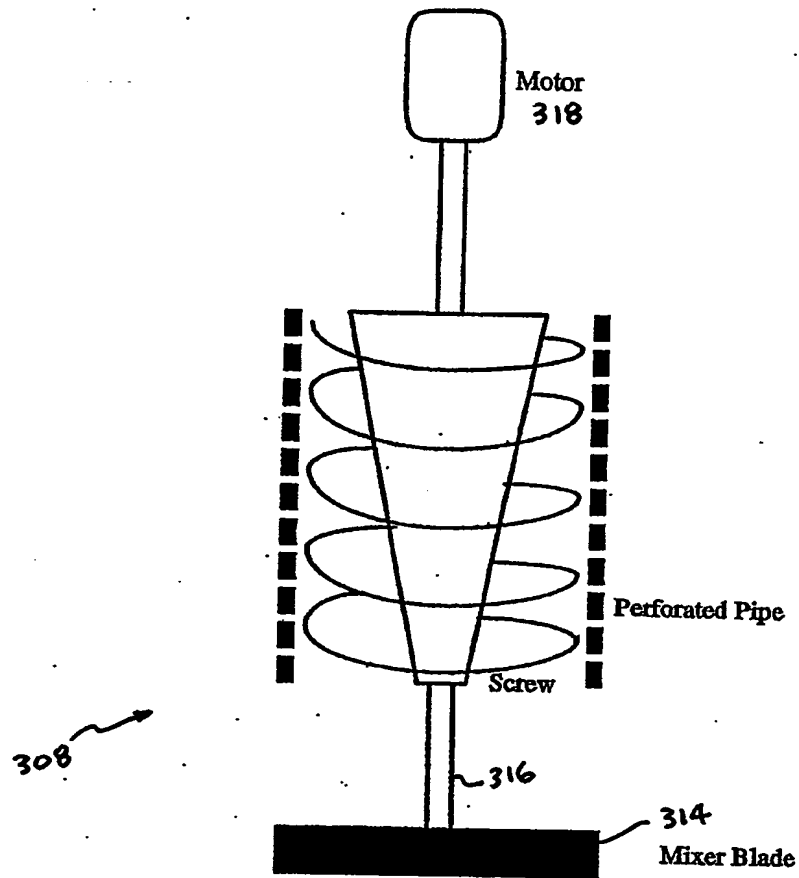
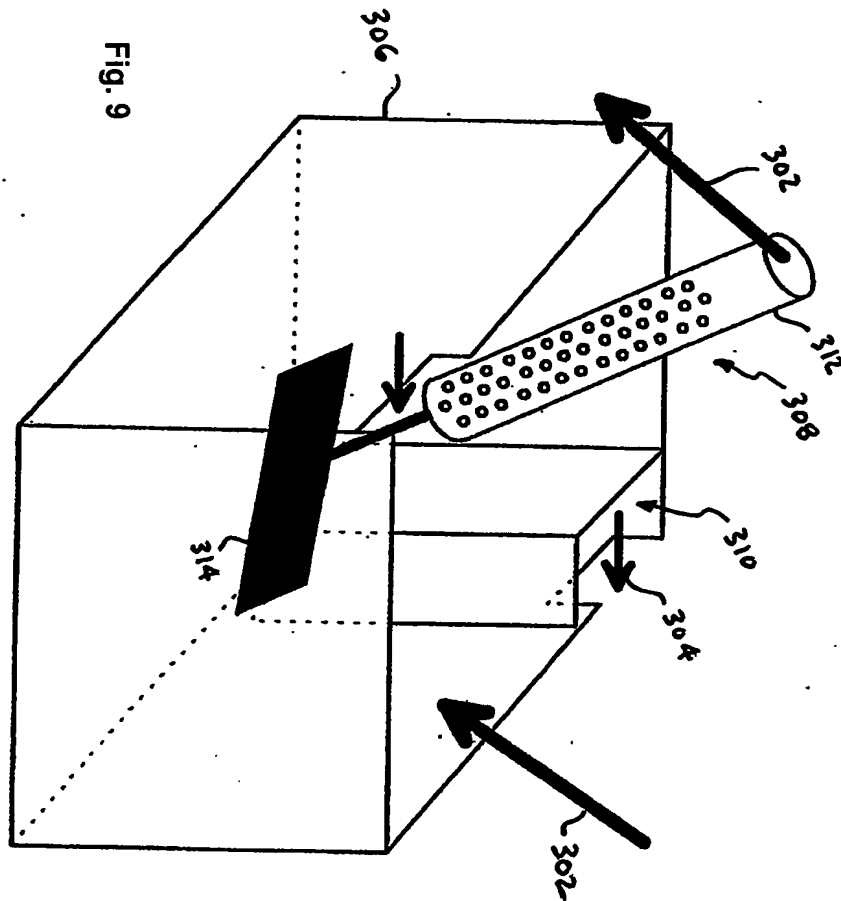
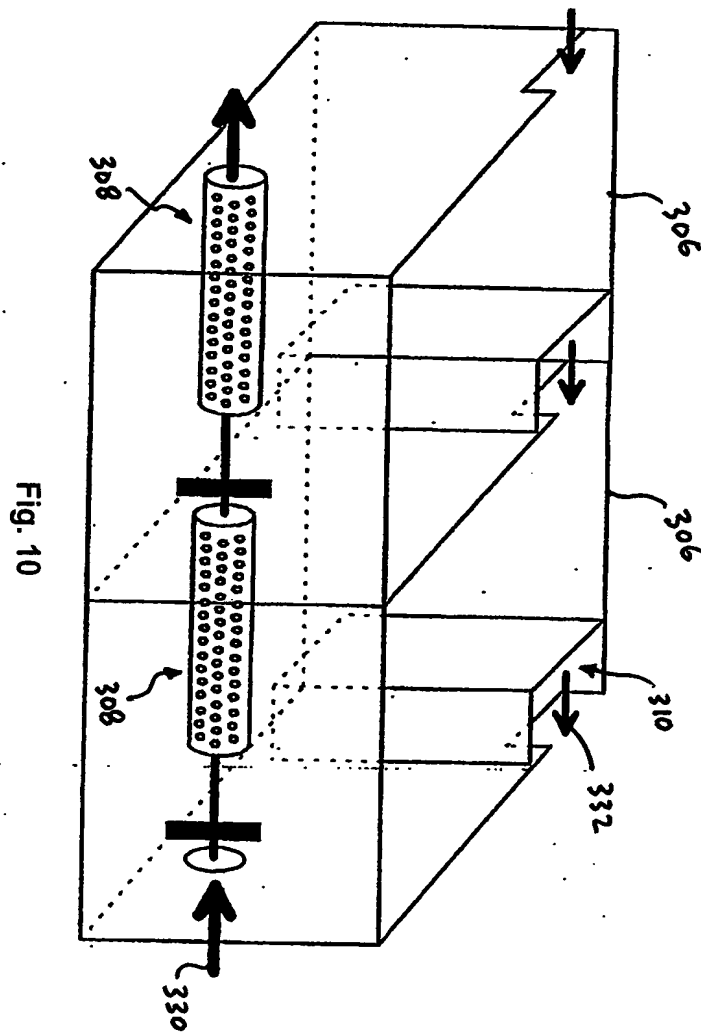


Fig. 8





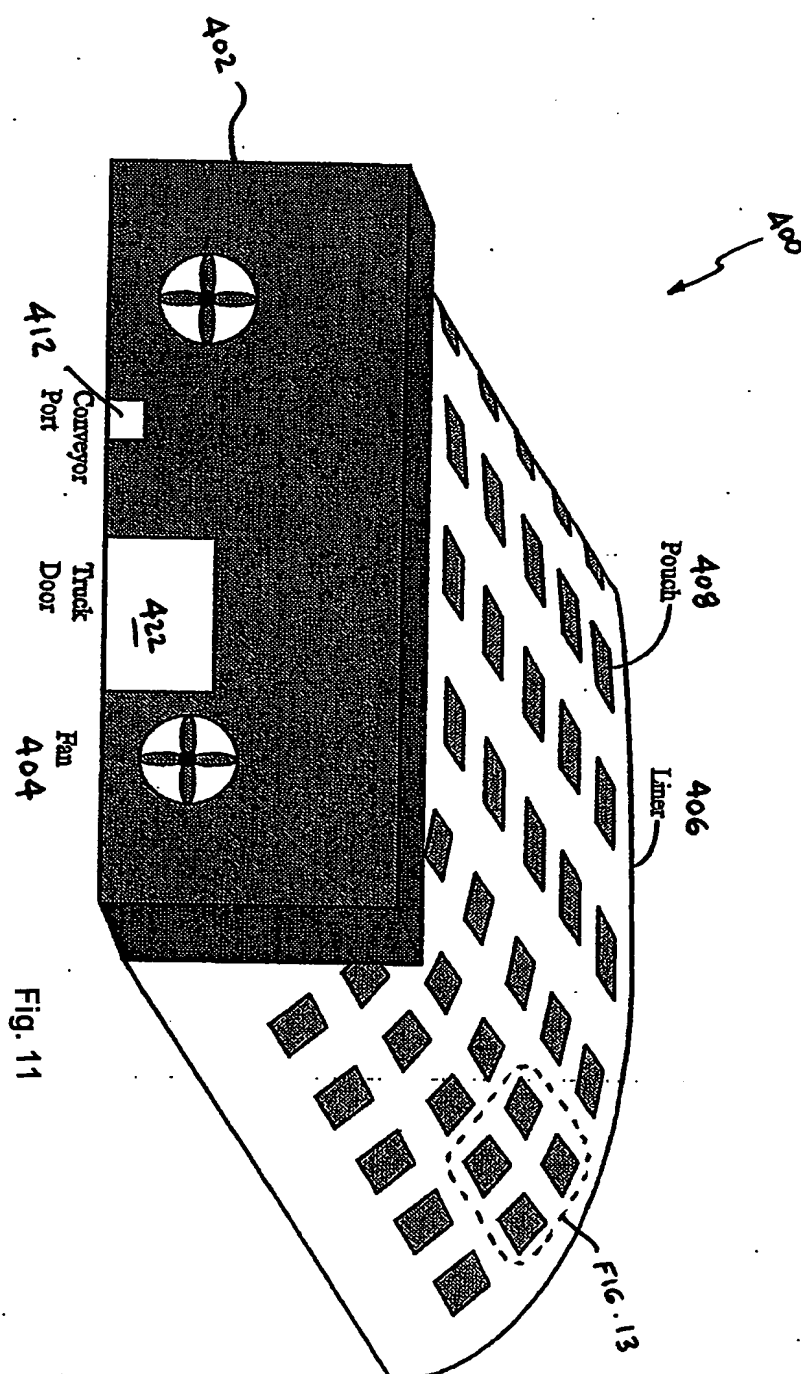
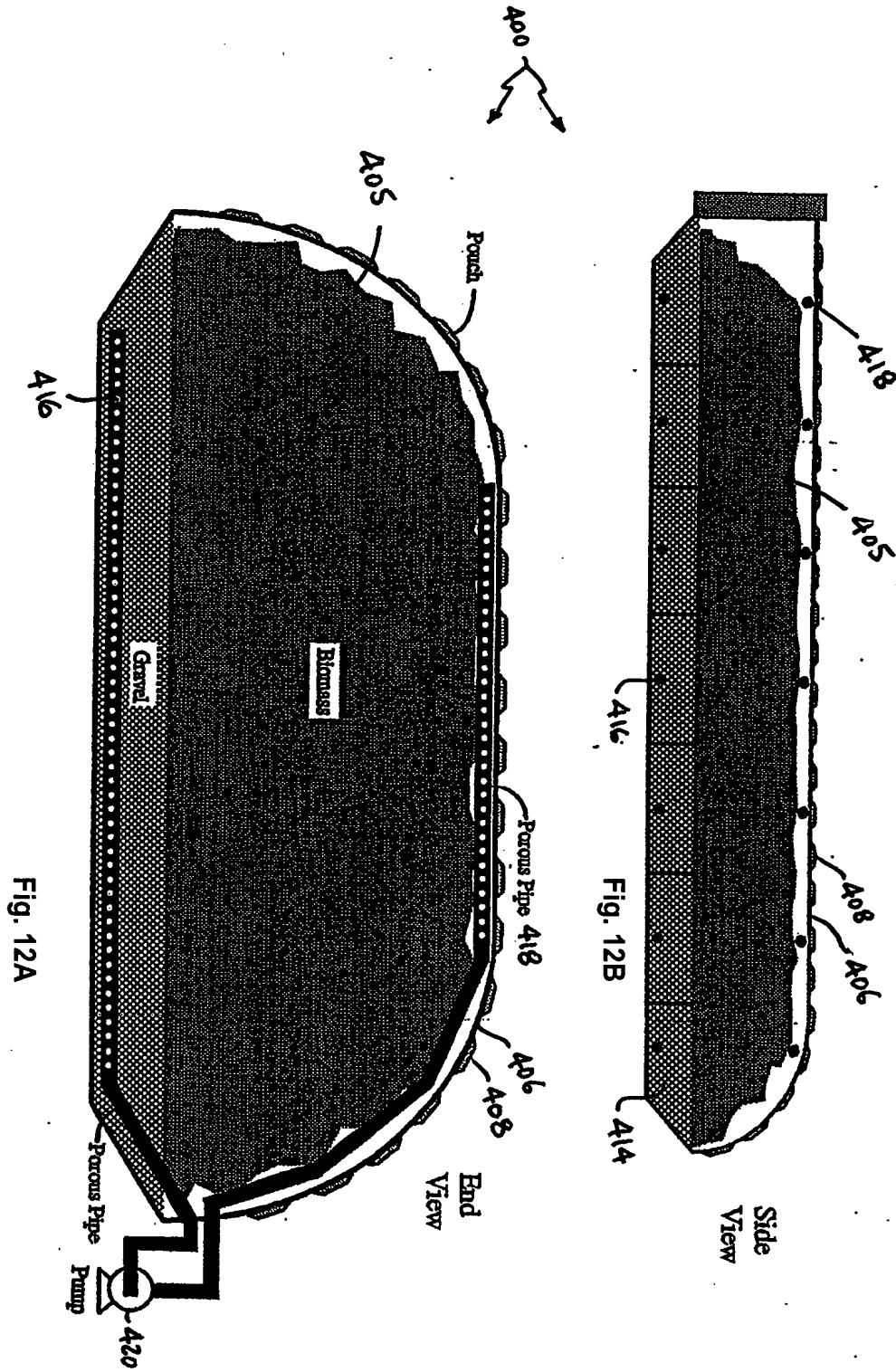
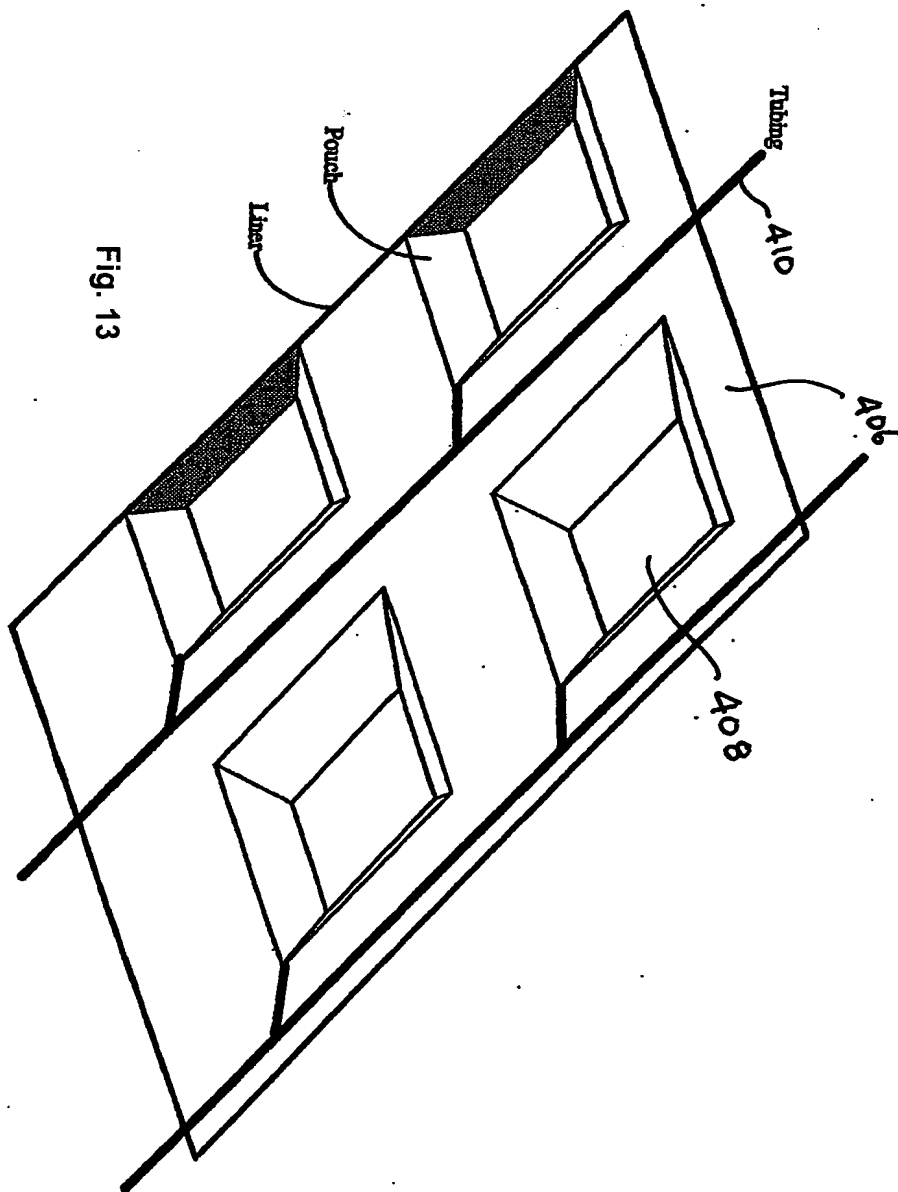


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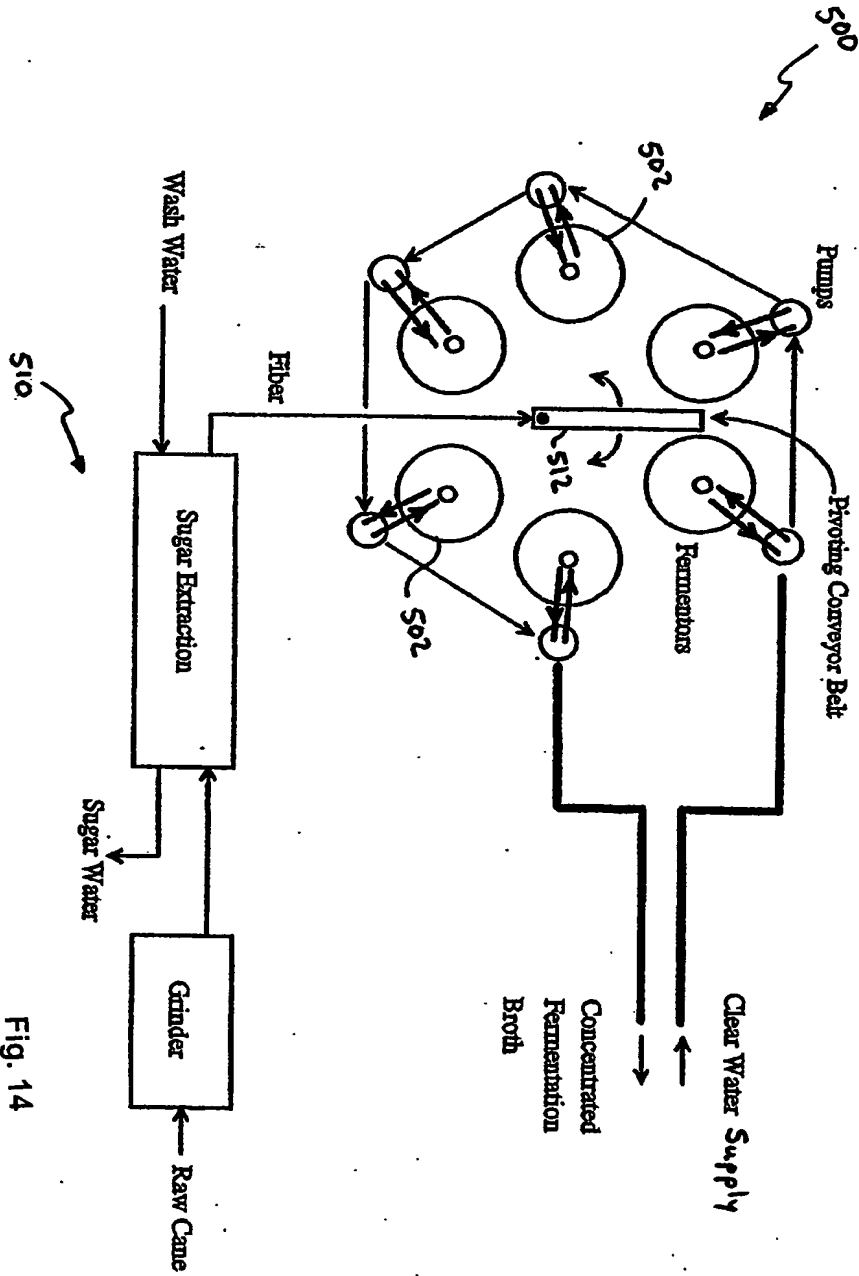


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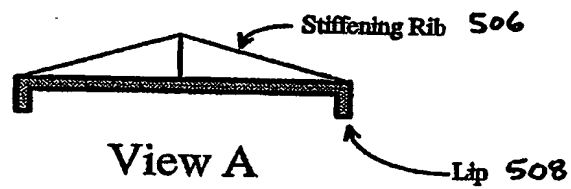
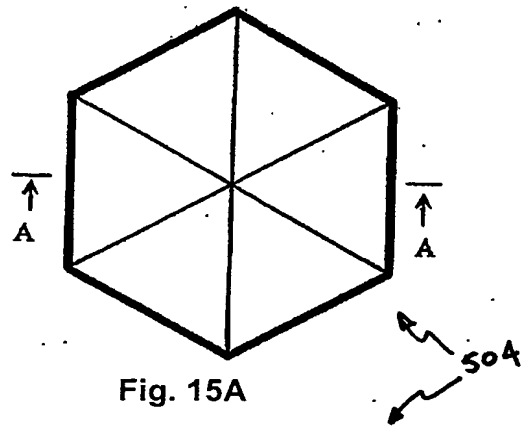


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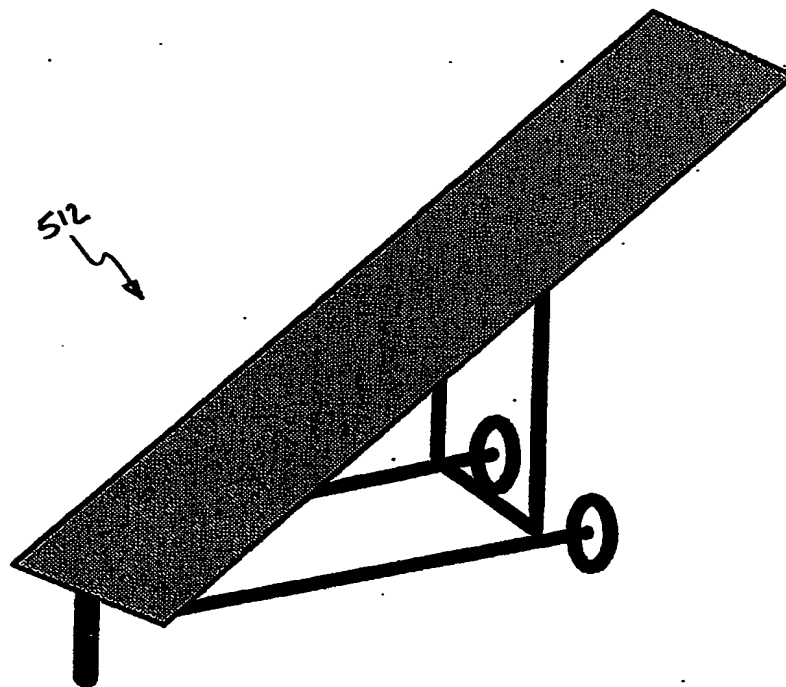
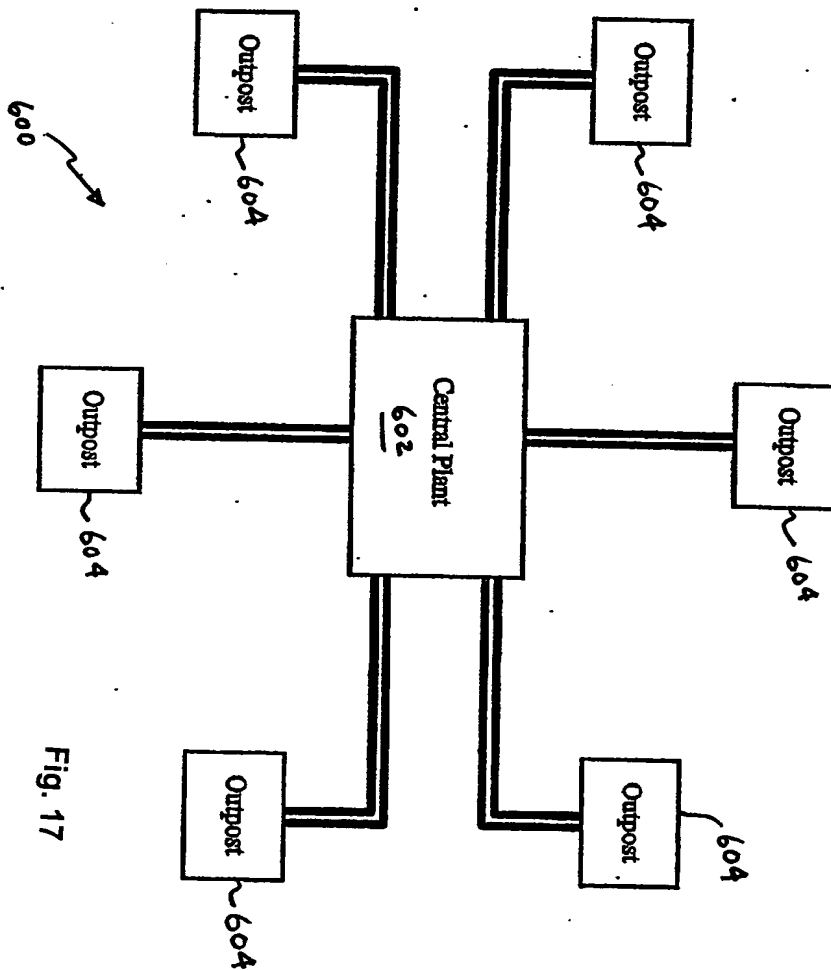


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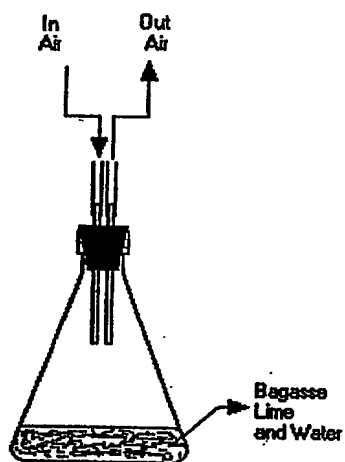


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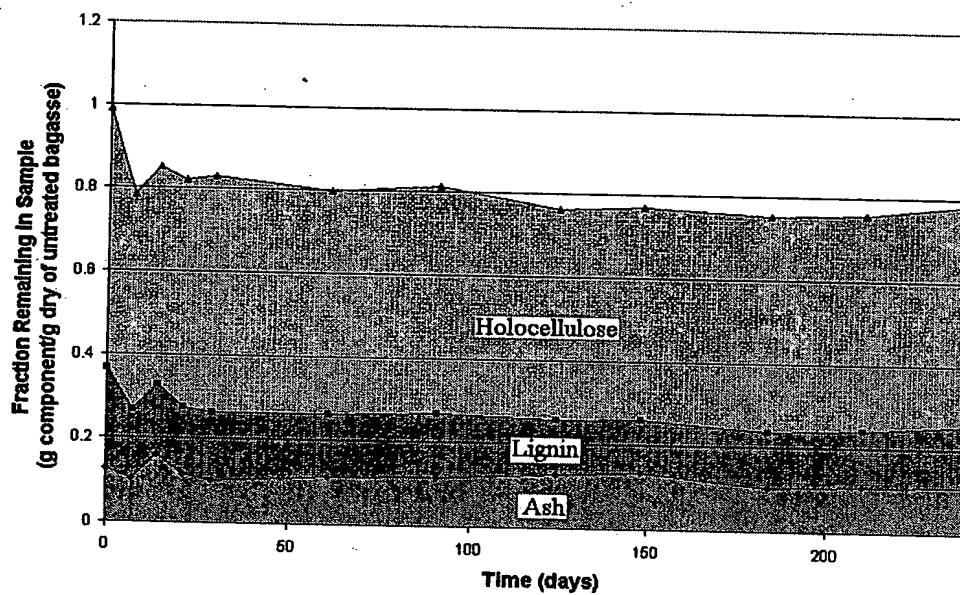


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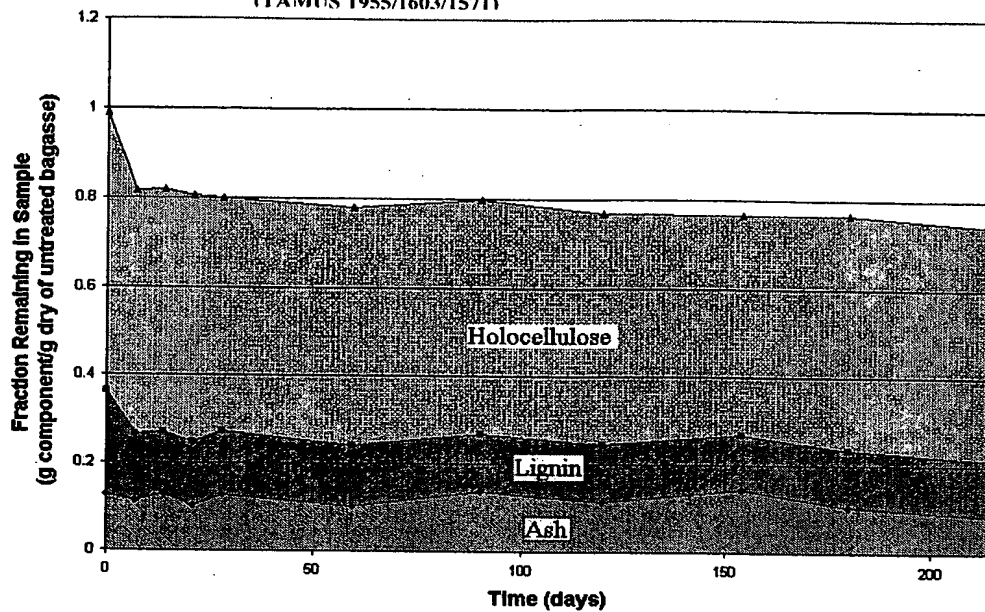


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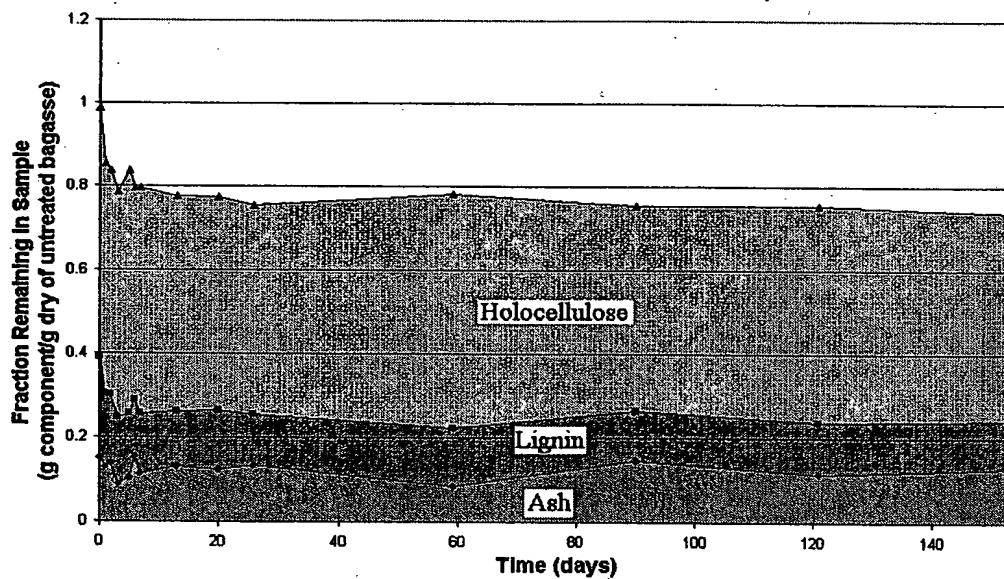


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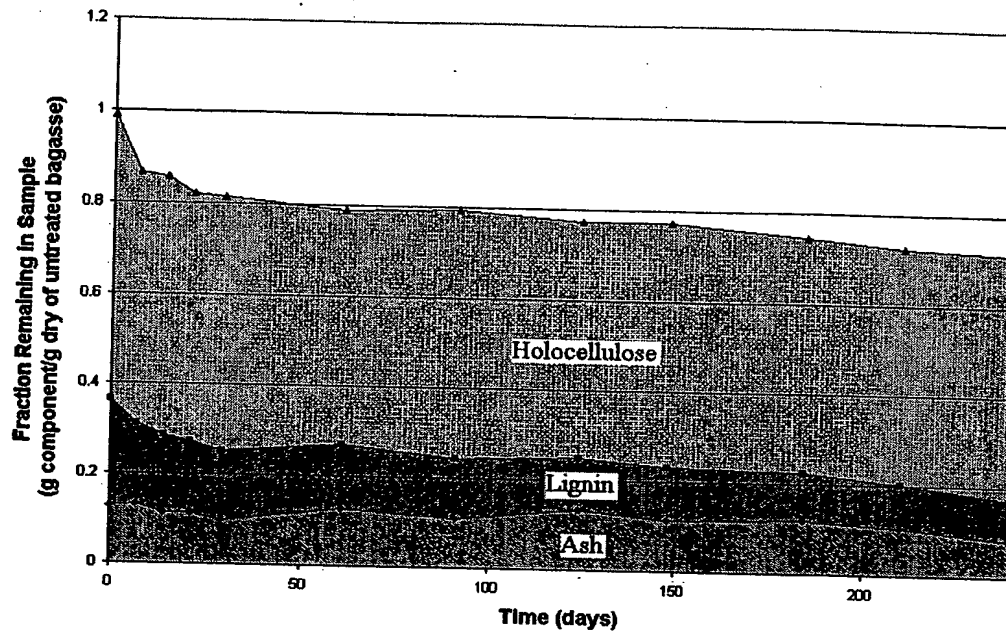


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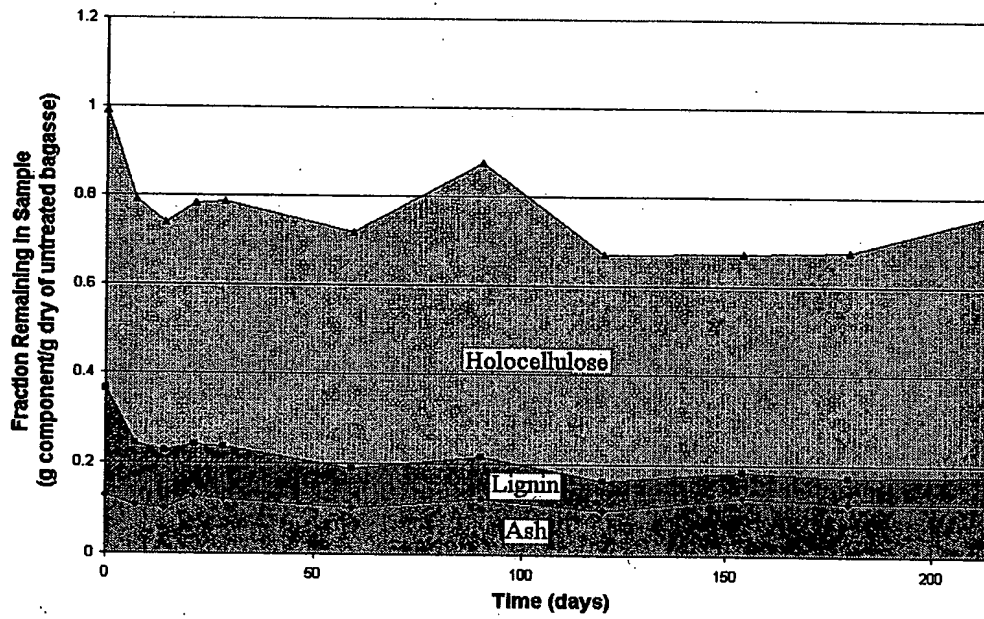


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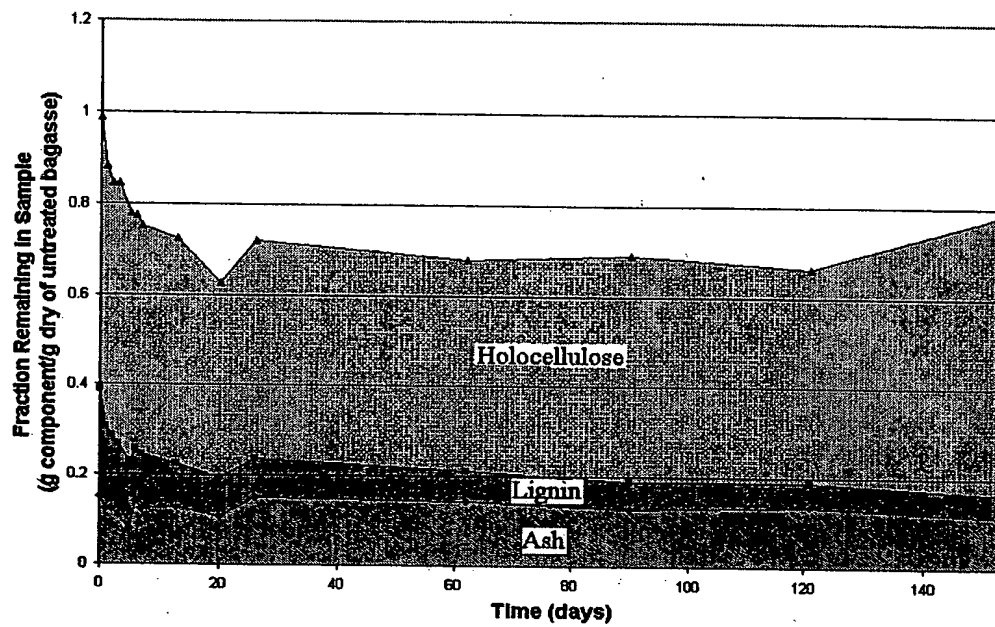


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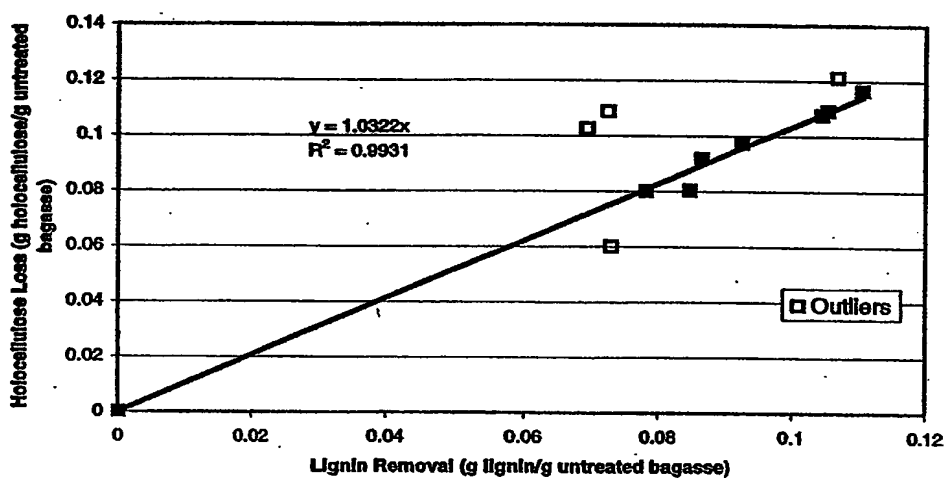


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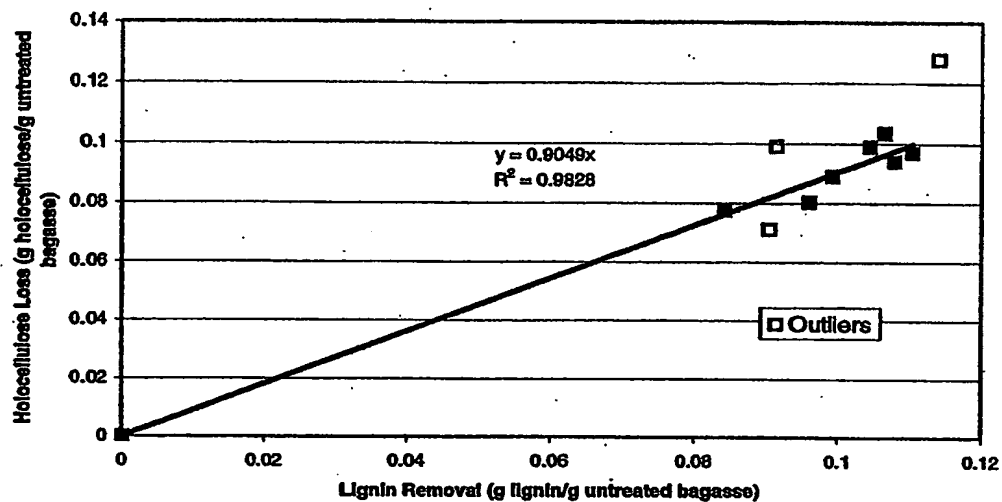


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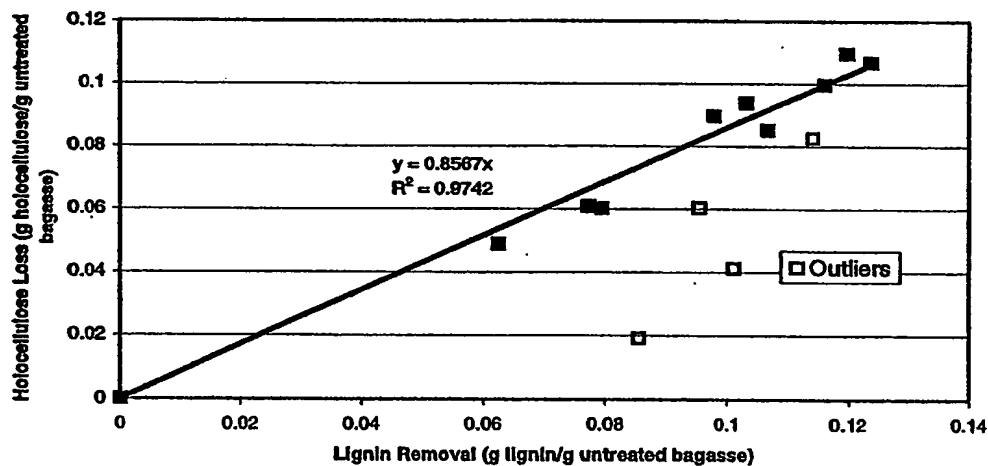


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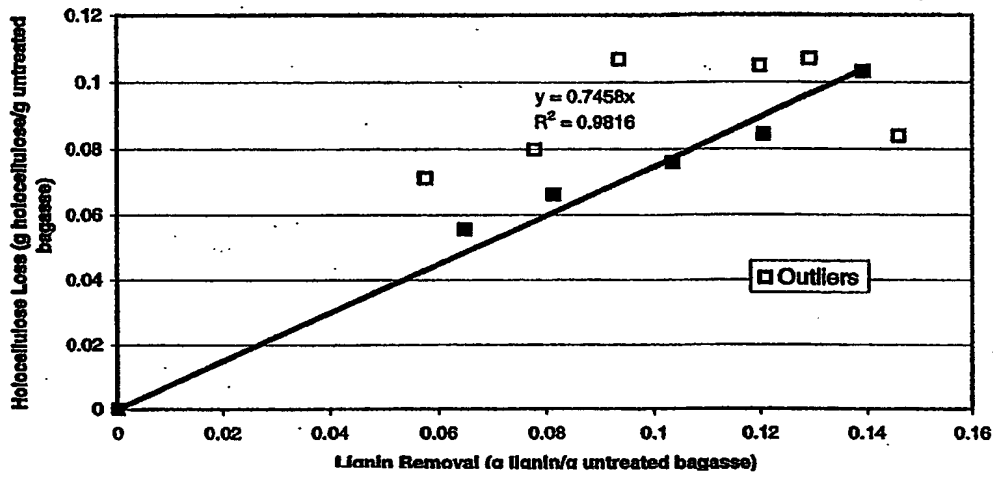


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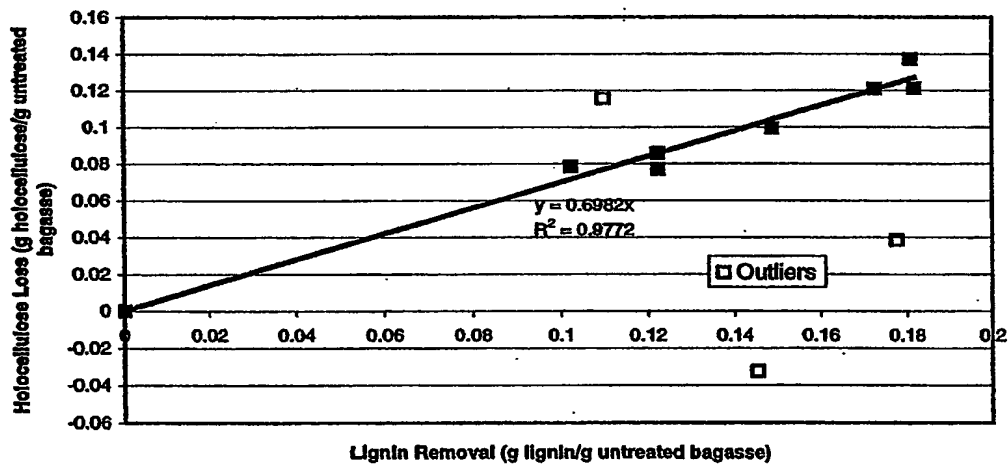


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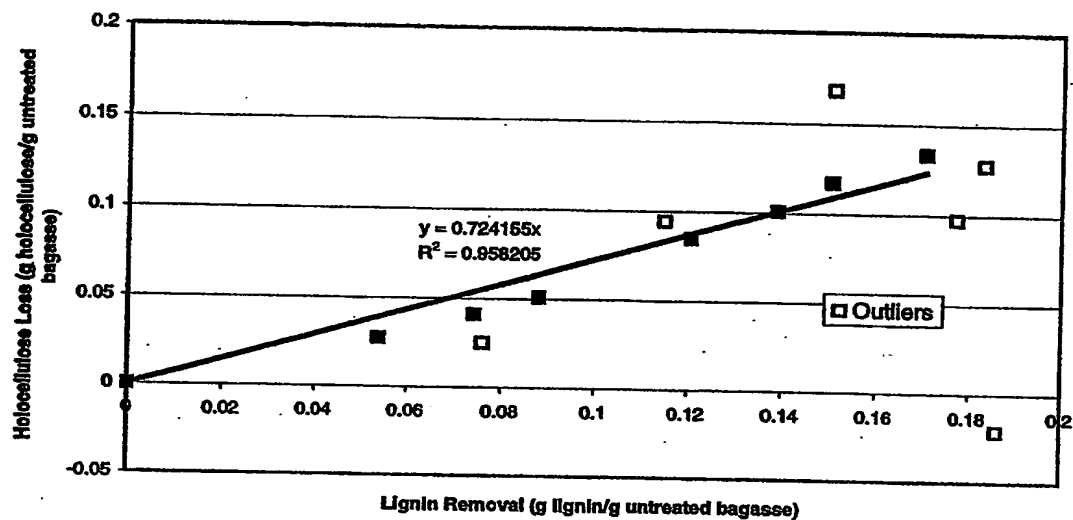


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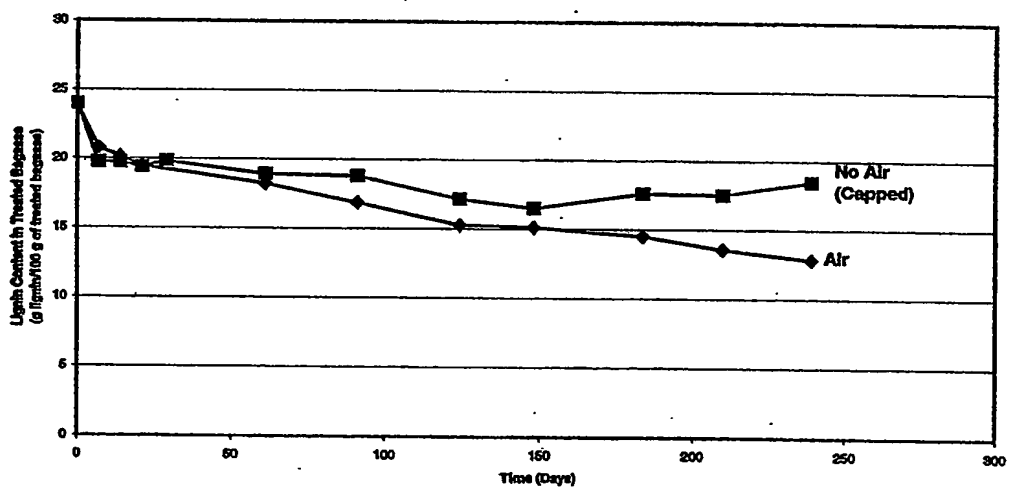


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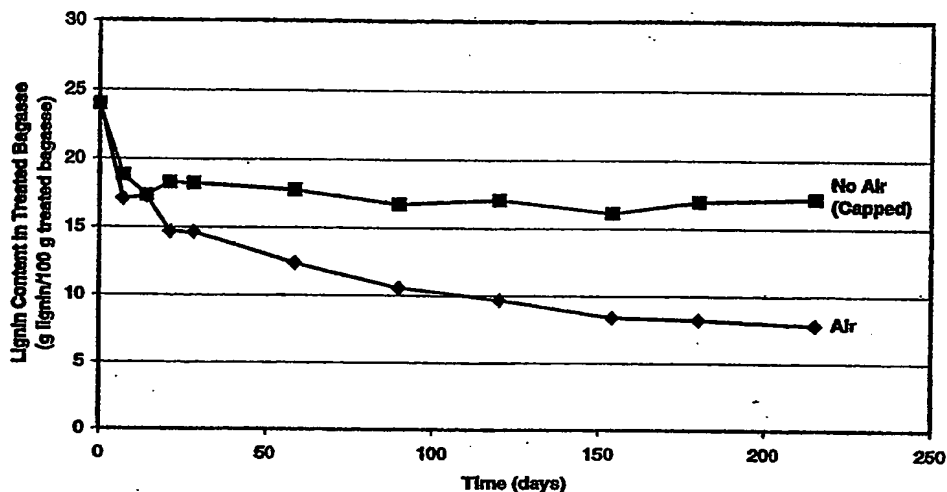


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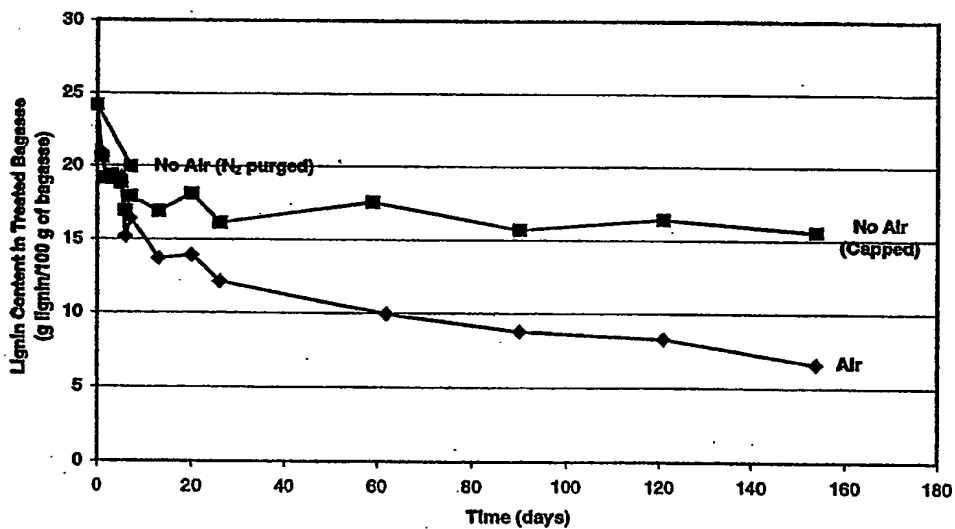


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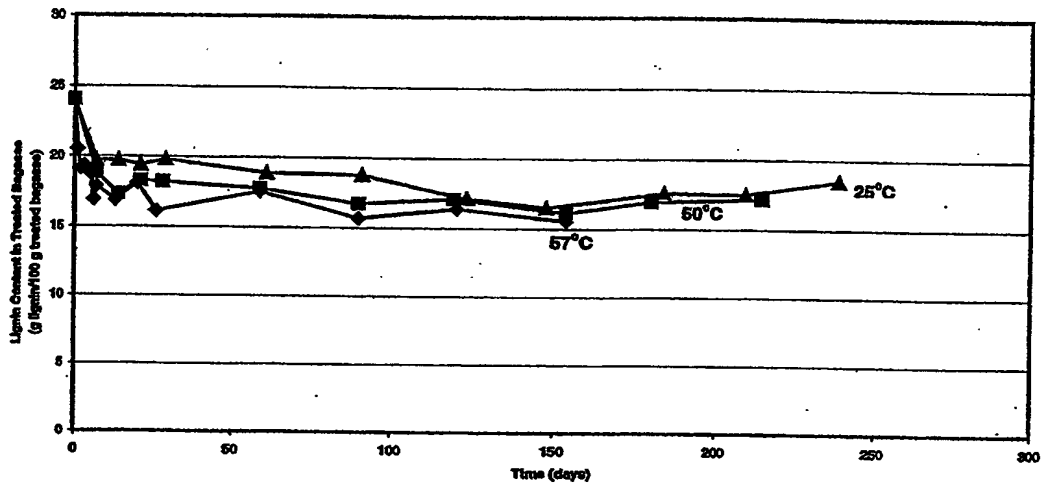


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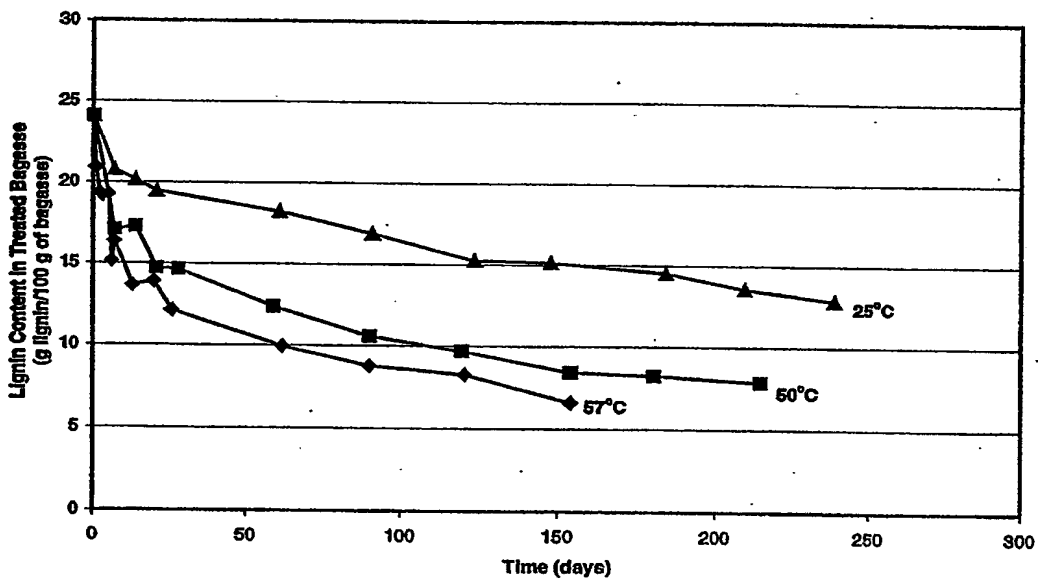


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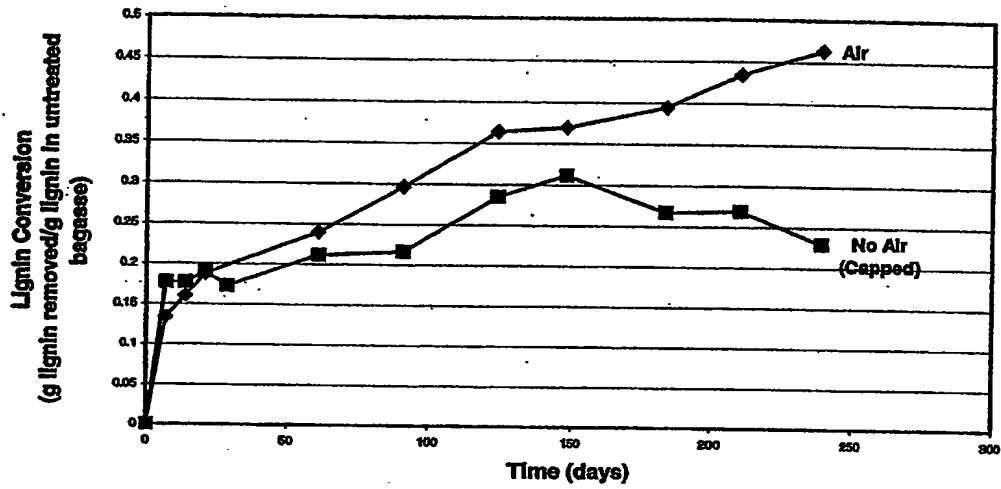


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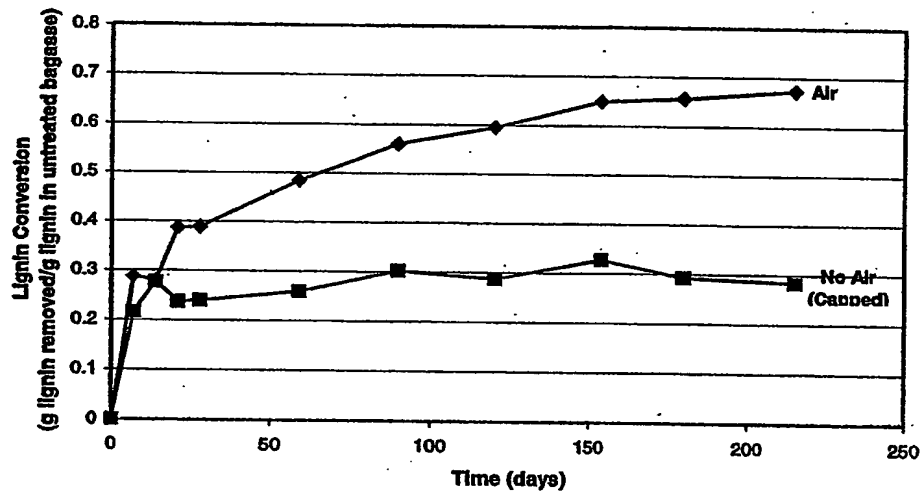


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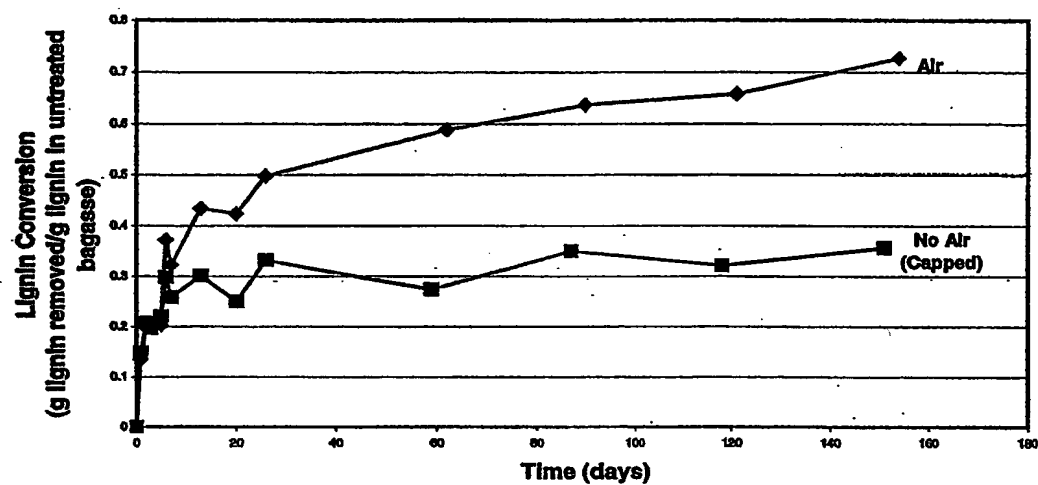


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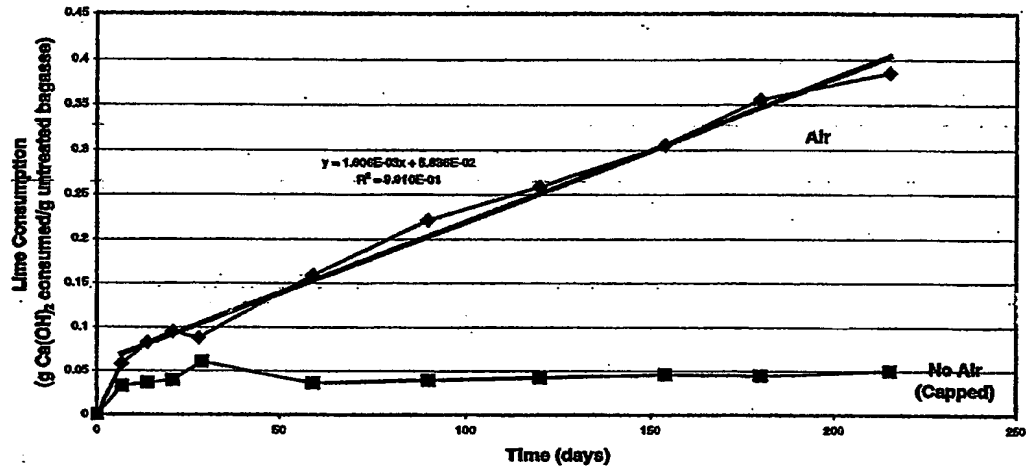


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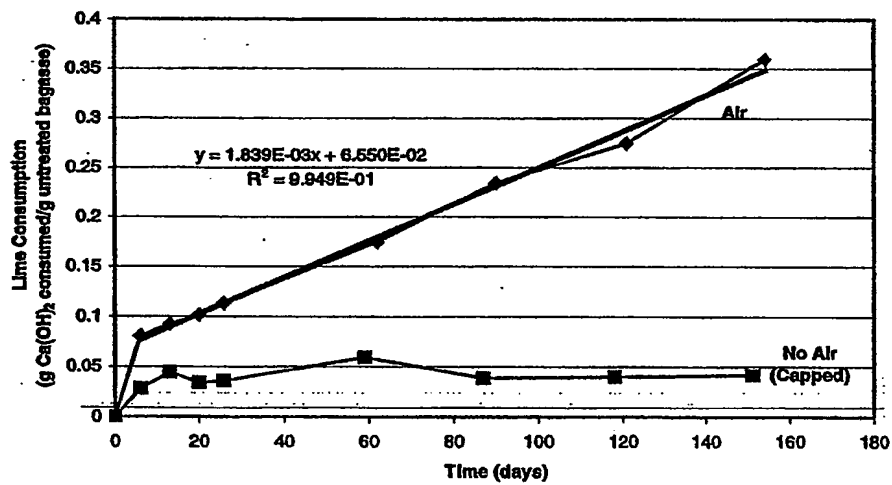


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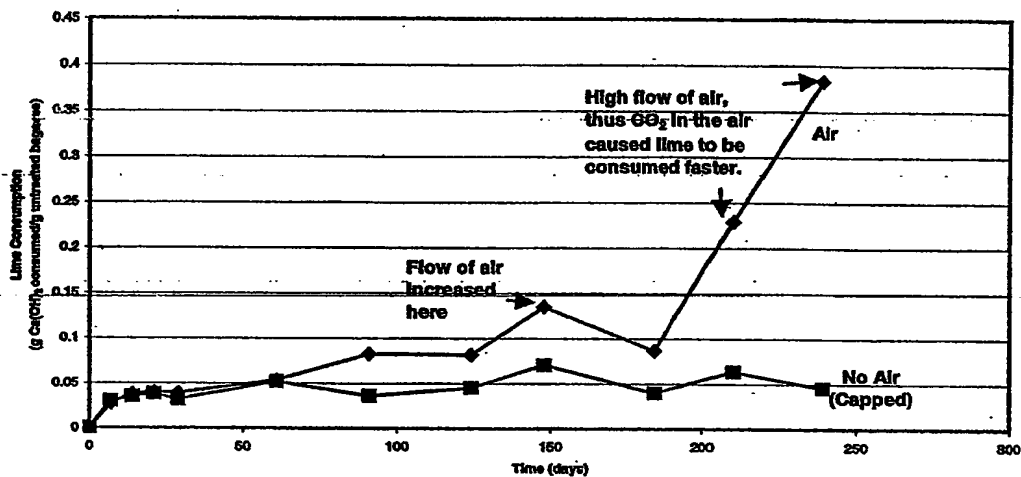


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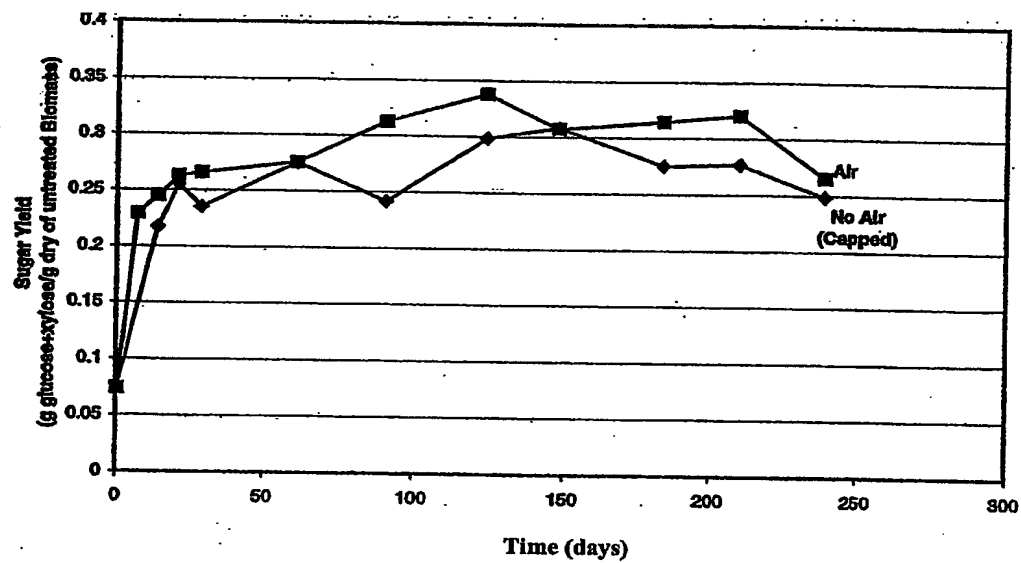


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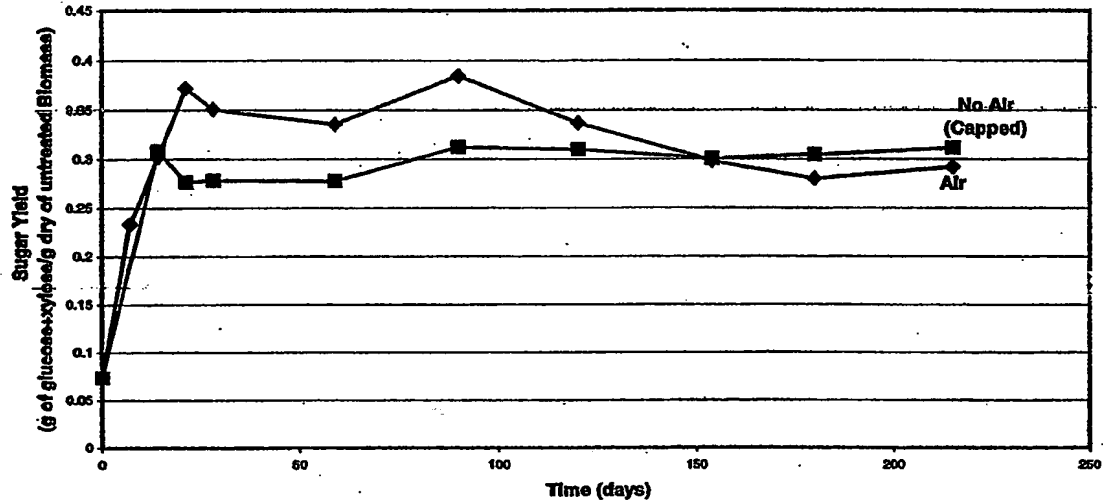


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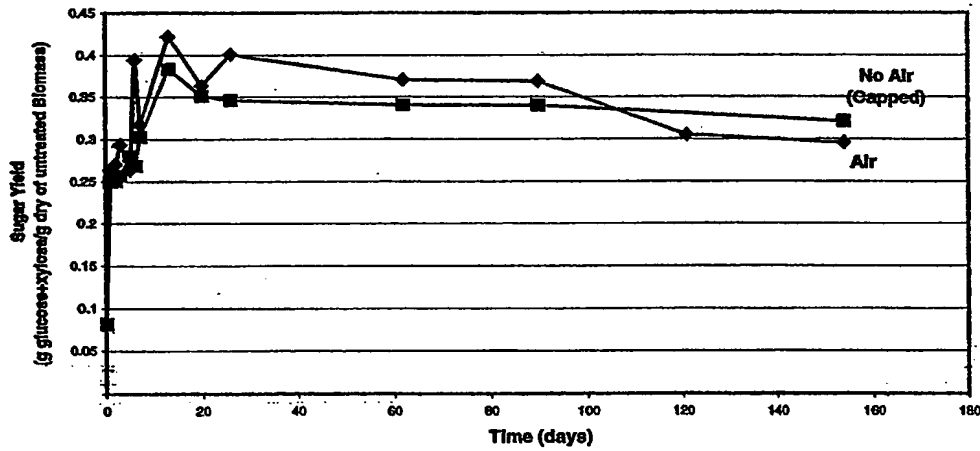


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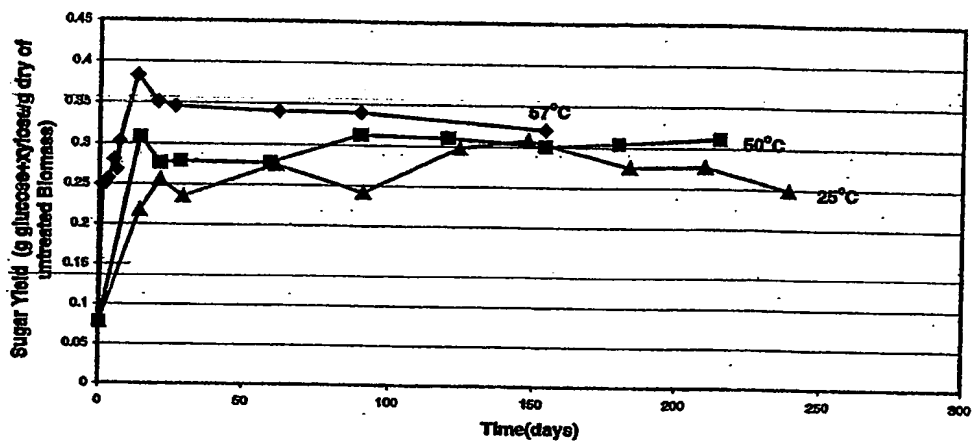


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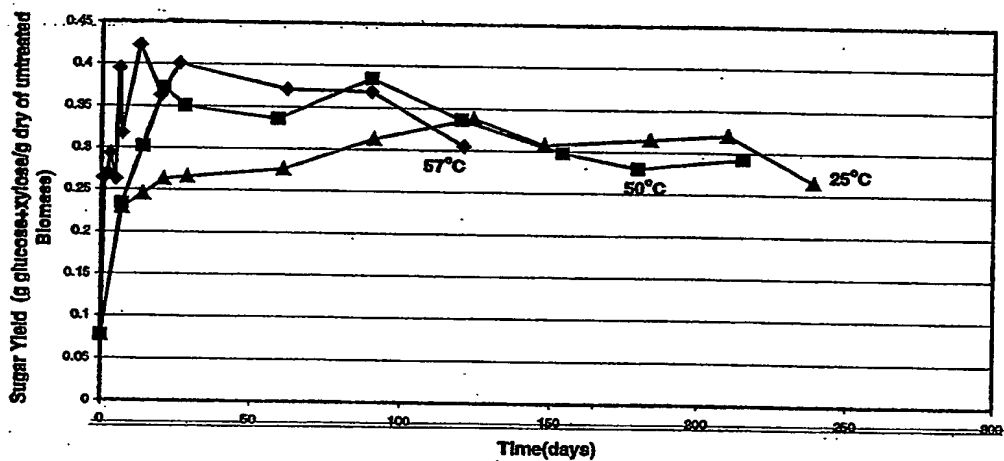


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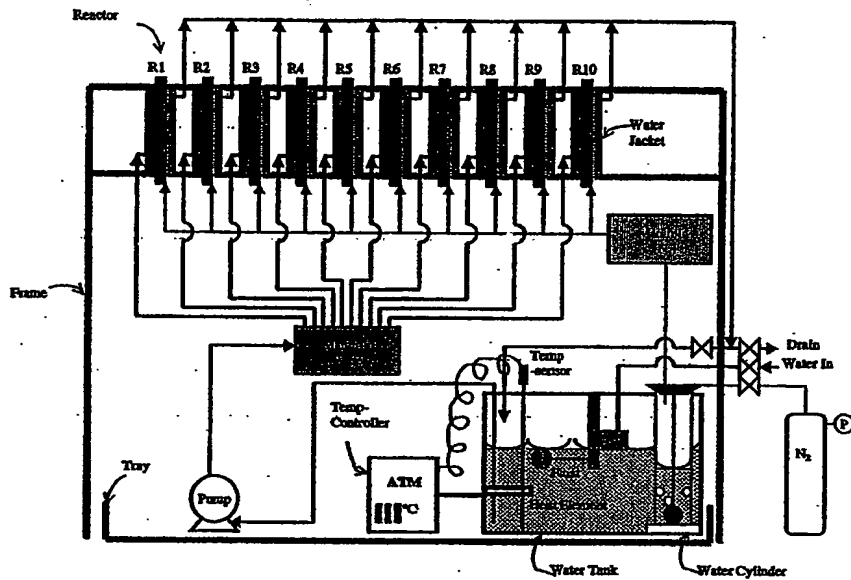


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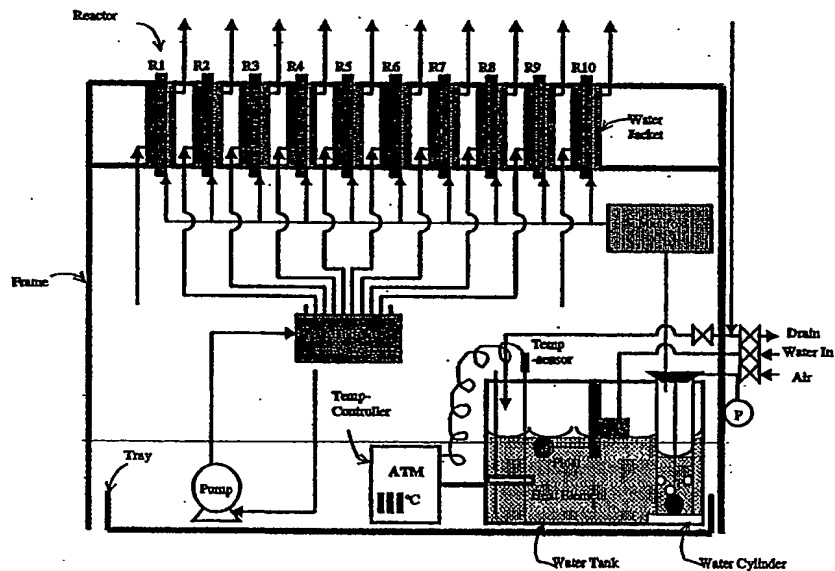


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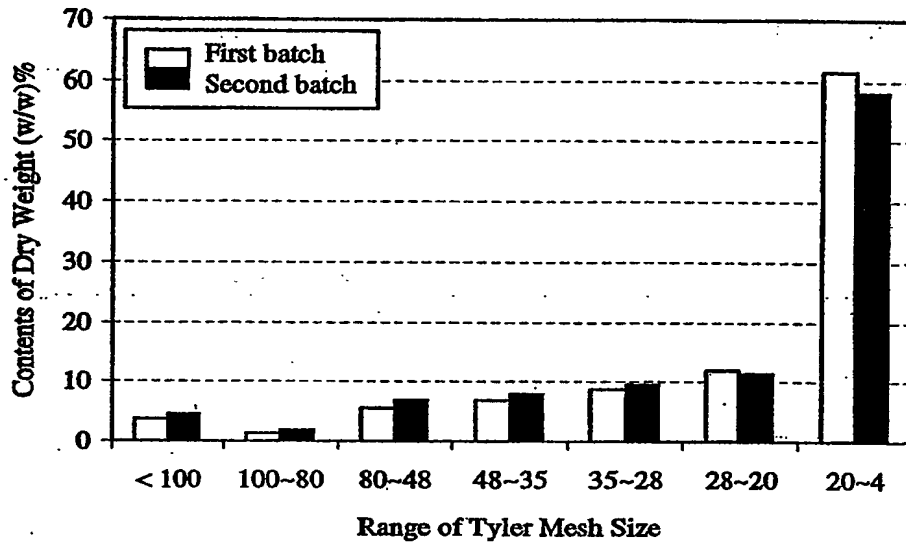


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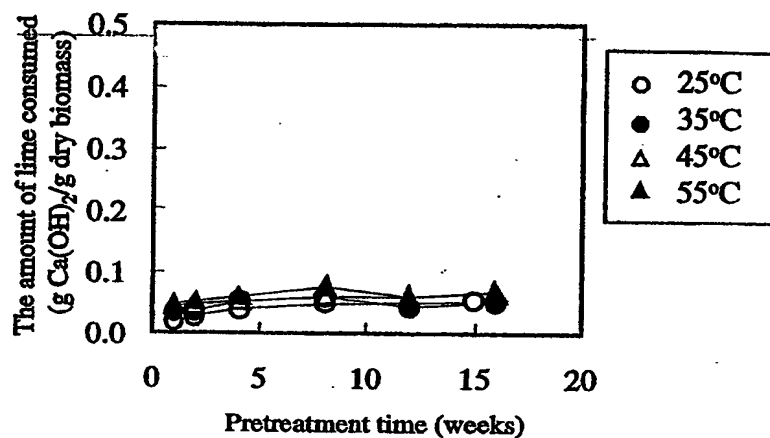


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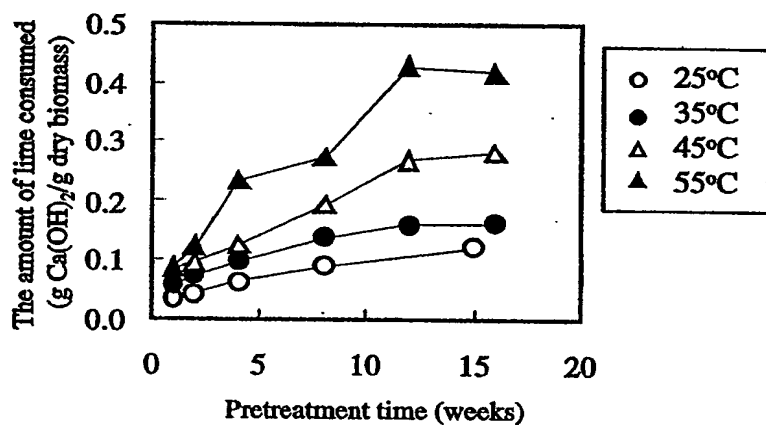


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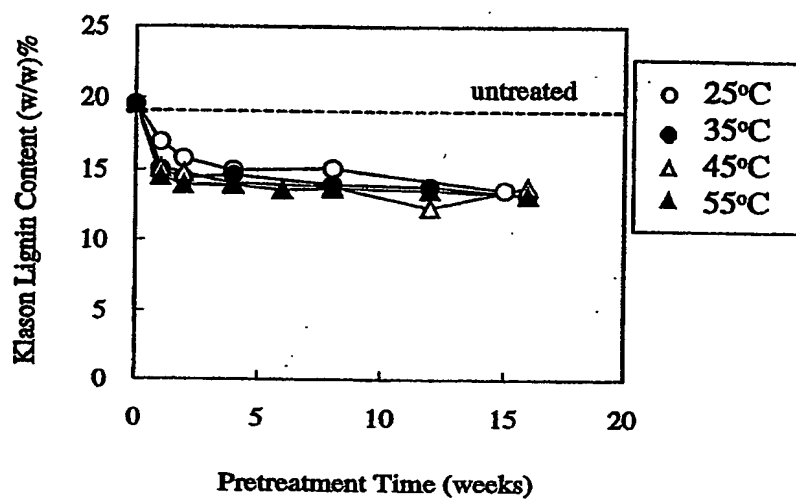


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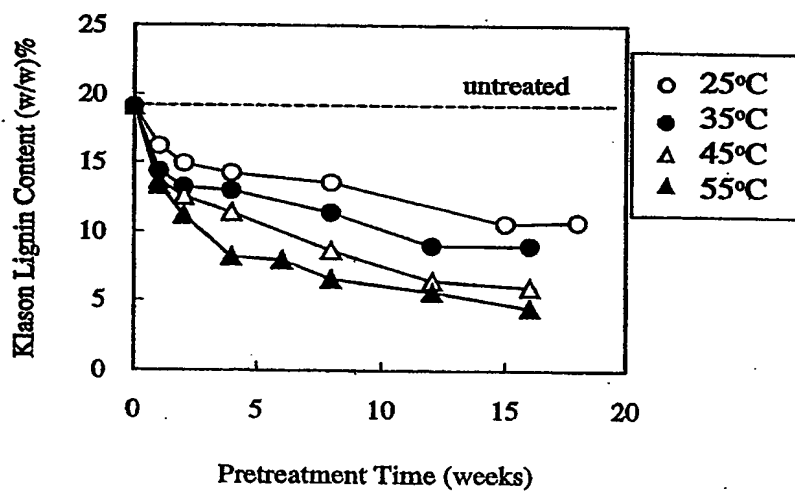


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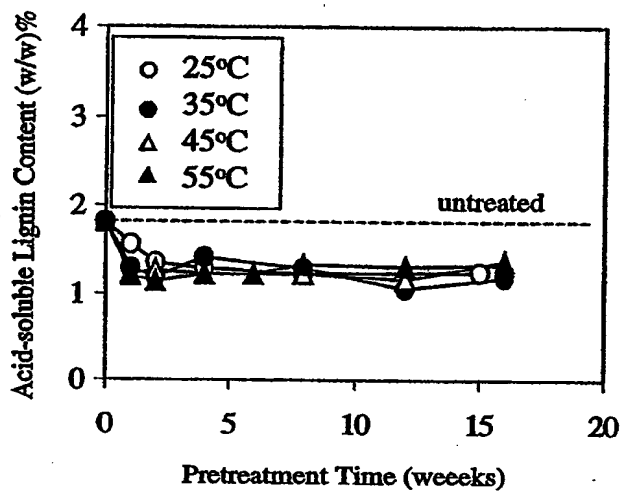


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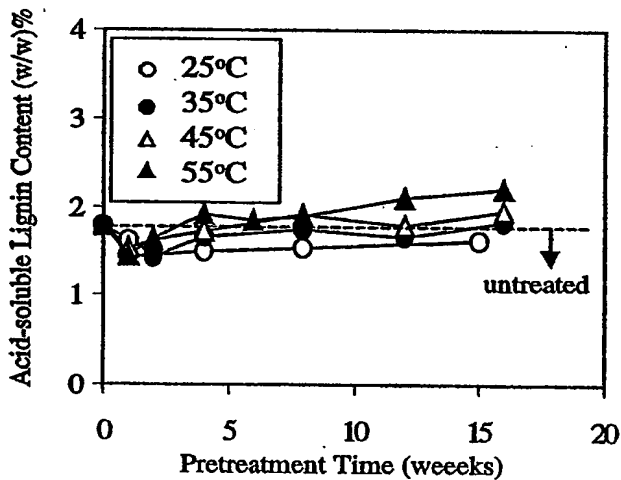


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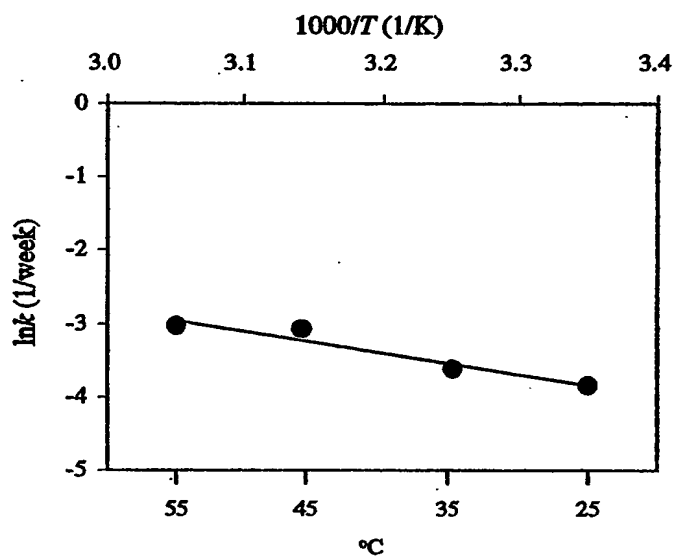


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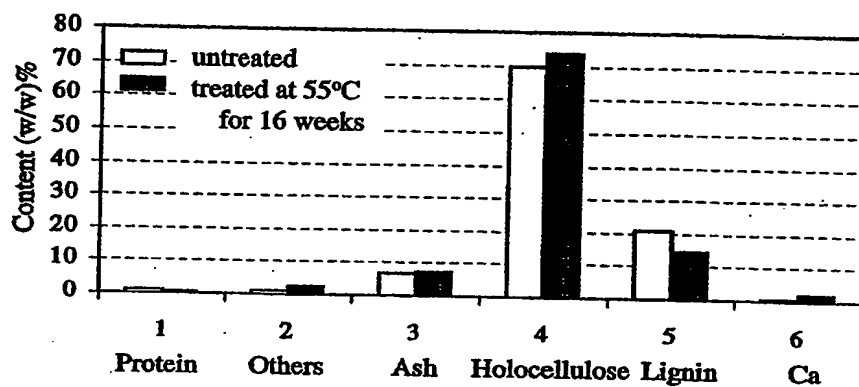


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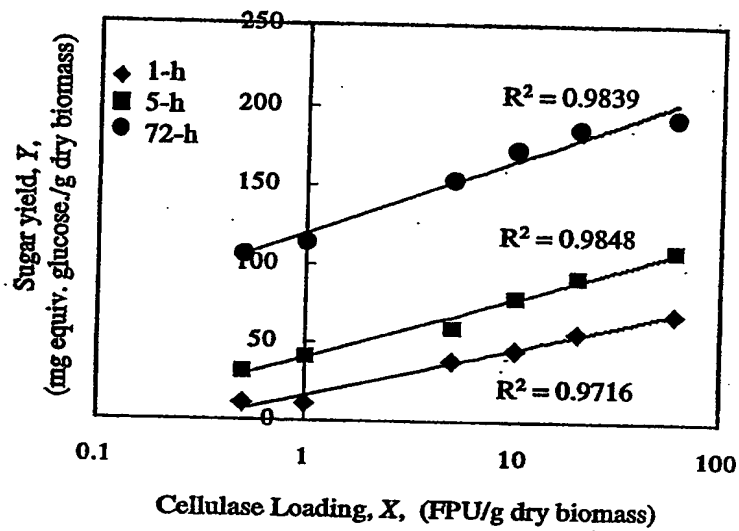


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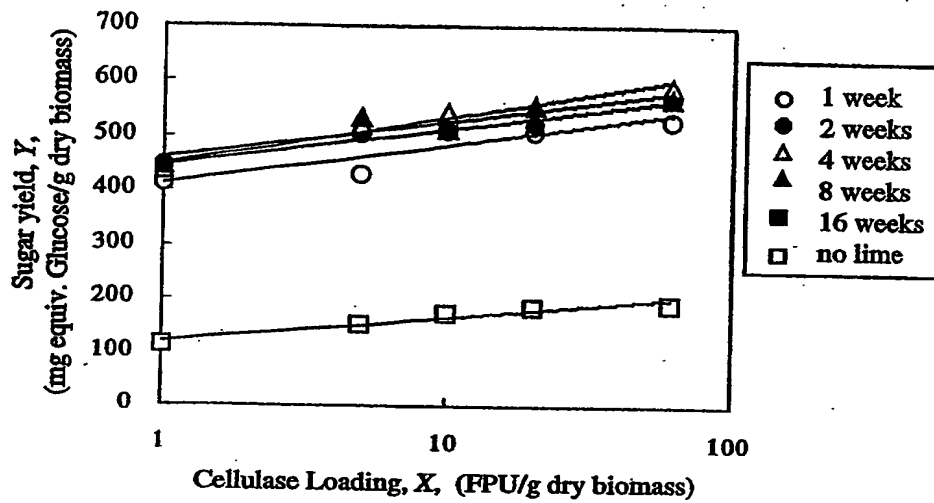


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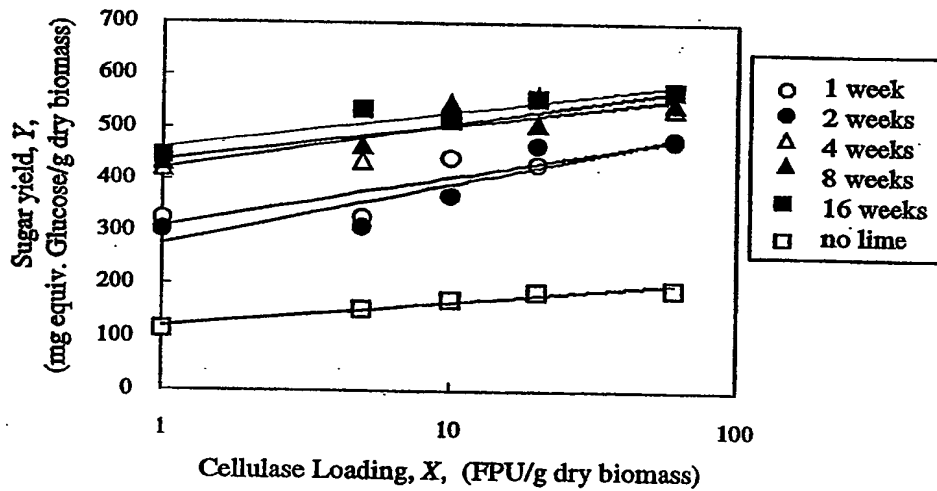


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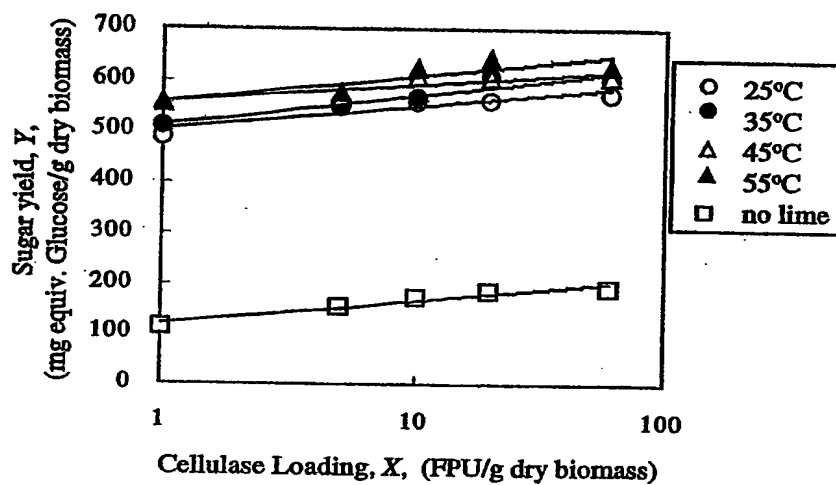
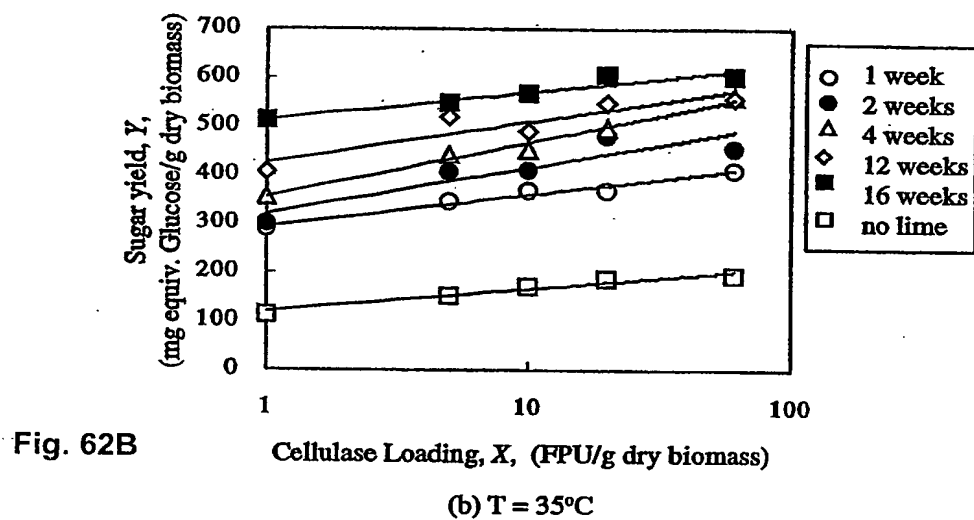
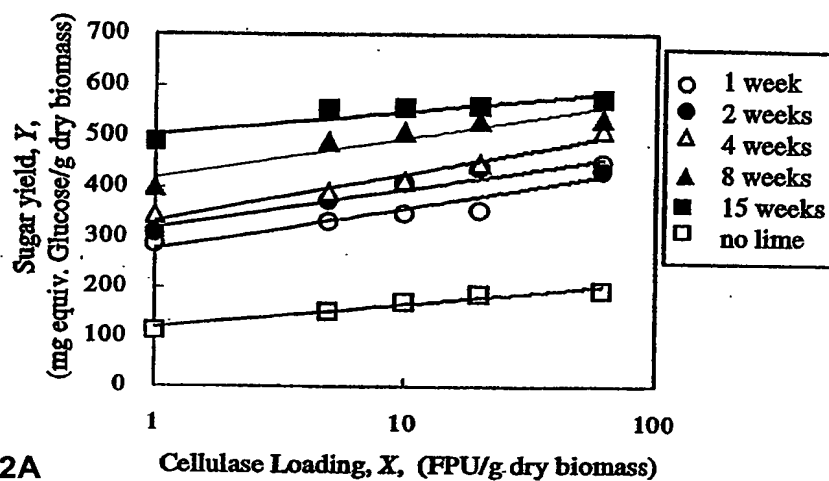
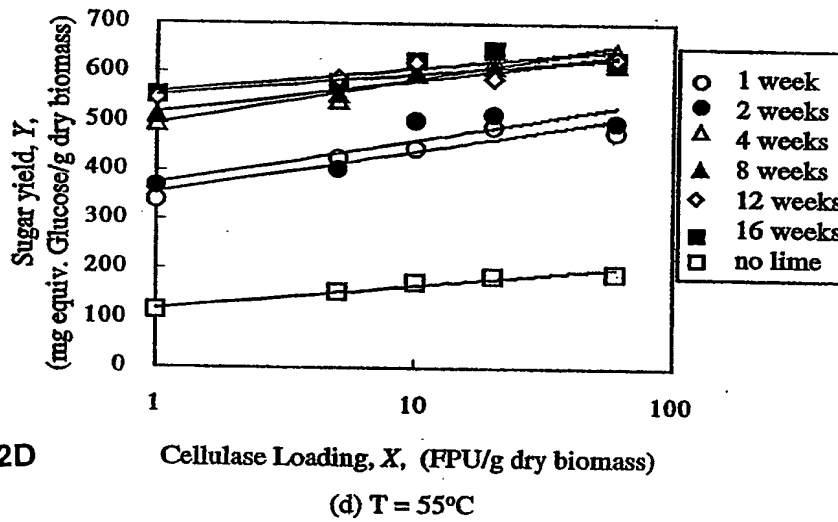
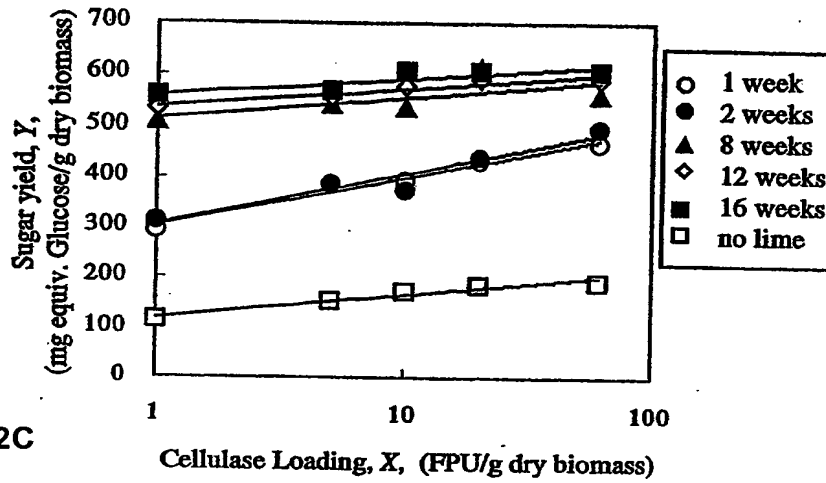


Fig. 61





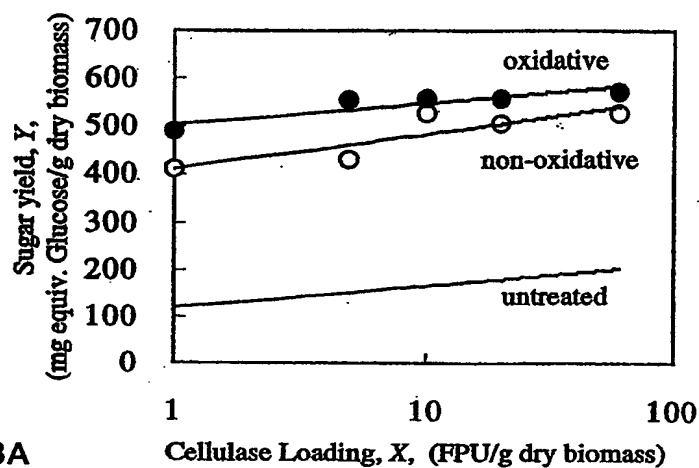


Fig. 63A

(a) $T = 25^{\circ}\text{C}$

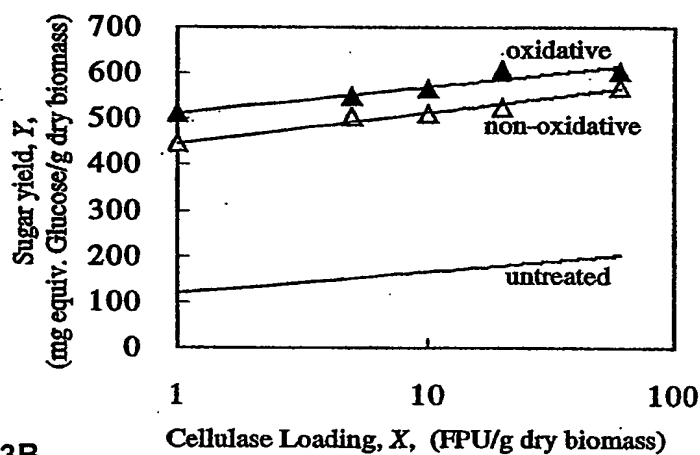
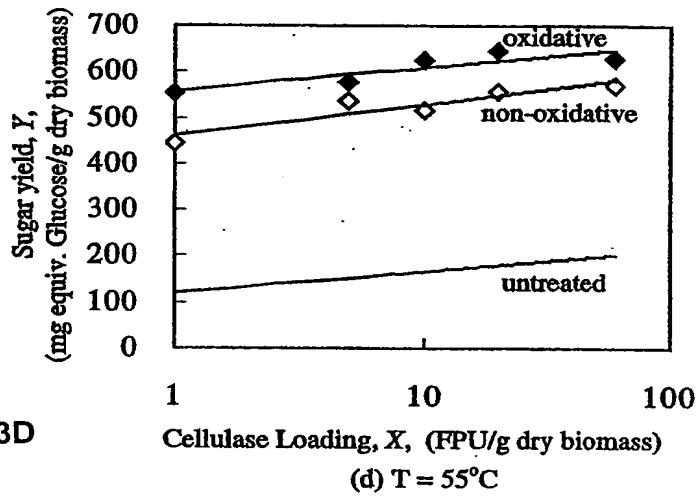
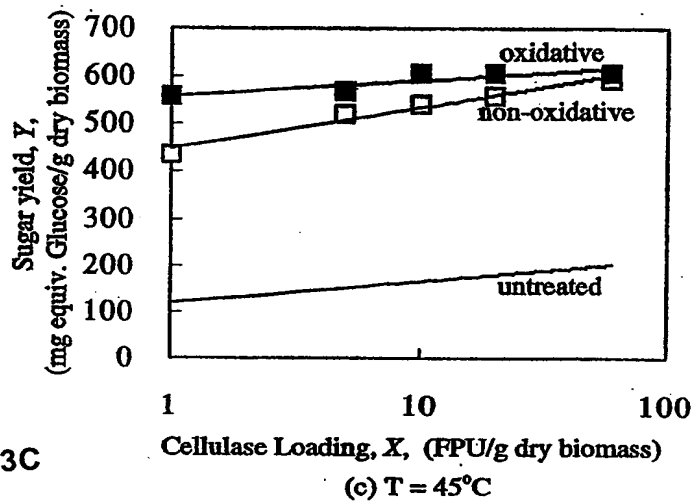


Fig. 63B

(b) $T = 35^{\circ}\text{C}$



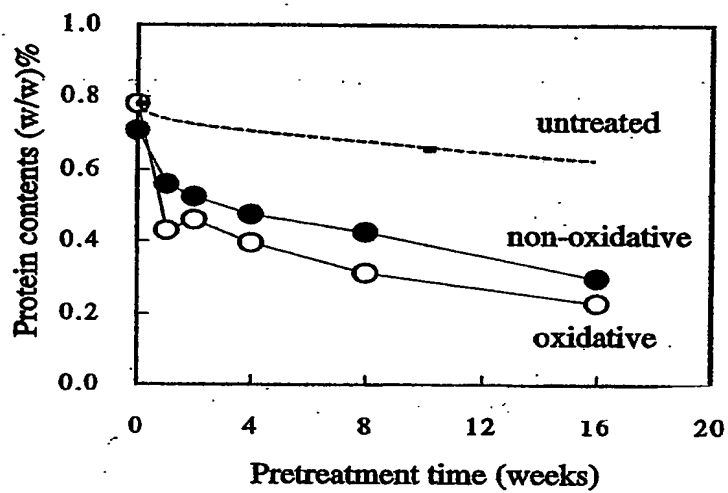


Fig. 64